Wetenschappelijk Jaaroverzicht 2010 van het Catharina-ziekenhuis

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Een uitgave van het Catharina-ziekenhuis
Eindhoven, 2011

Inhoudsopgave

Woord Vooraf

Voor u ligt het wetenschappelijk jaaroverzicht van het Catharina-ziekenhuis. Het biedt u inzicht in de wetenschappelijke activiteiten die in 2010 zijn ondernomen. En de ambitie van onze medewerkers was en is groot. Dat blijkt ook uit de ruim 240 wetenschappelijke publicaties en het feit dat tien medewerkers promoveerden.

Wetenschappelijk onderzoek is onderdeel van het topklinische en topreferente karakter van ons ziekenhuis. Onderzoek levert een wezenlijke bijdrage aan de evidence van interventies, waardoor we in staat zijn te handelen naar de nieuwste inzichten, resulterend in een grotere veiligheid voor de patiënt.
Vanzelfsprekend dat in de vele opleidingen van de medisch (ondersteunende) specialismen veel aandacht wordt besteed aan competenties, die noodzakelijk zijn om de wetenschap te bedrijven. Het maakt mensen nieuwsgierig, onderzoekend, reflecterend. Eigenschappen die gekoesterd moeten worden.

In dit wetenschappelijk jaarverslag treft u de publicaties aan die in 2010 zijn verschenen. De publicaties zijn geclassificeerd naar specialisme. Daarnaast zijn de voordrachten en de posters van de wetenschapsavond in 2010 opgenomen.

De Raad van Bestuur van het Catharina-ziekenhuis is verheugd u dit wetenschappelijk jaaroverzicht aan te kunnen bieden. We hopen dat de inhoud u inspireert voor uw eigen dagelijkse praktijk en wellicht suggesties oplevert voor nieuw of vervolgonderzoek.

Dr. P.L. Batenburg
Voorzitter Raad van Bestuur

Algemeen Klinisch Laboratorium

Artikelen

Berkel M van

Electrolyte-balanced heparin in blood gas syringes can introduce a significant bias in the measurement of positively charged electrolytes

Berkel M van*, Scharnhorst V*

Clin Chem Lab Med. 2010 Dec 14 [Epub ahead of print]

Background: Heparin binds positively charged electrolytes. In blood gas syringes, electrolytebalanced heparin is used to prevent a negative bias in electrolyte concentrations. The potential preanalytical errors introduced by blood gas syringes are largely unknown. Here, we evaluate electrolyte concentrations in non-anticoagulated blood compared with concentrations measured in electrolytebalanced blood gas syringes. Methods: Venous blood was collected into plain tubes. Ionized calcium, potassium, sodium and hydrogen ions were analyzed directly using a blood gas analyzer and the remaining blood was collected into different blood gas syringes in random order: Preset (Becton Dickinson), Monovette (Sarstedt) and Pico 50-2 (Radiometer). Results: Ionized calcium and sodium concentrations were significantly lower in blood collected in Becton Dickinson and Sarstedt syringes compared to non-heparinized (NH) blood. The mean bias exceeded biological variation-based total allowable error, which in most cases leads to clinically misleading individual results. In contrast, ionized calcium concentrations in blood collected in Pico 50-2 syringes were identical to values obtained from NH blood. Sodium showed a minor, yet statistically significant, bias. Conclusions: Despite the fact that blood gas syringes now contain electrolyte-balanced heparin, one should be aware of the fact that these syringes can introduce pre-analytical bias in electrolyte concentrations. The extent of the bias differs between syringes.

Boer AK

Invloed van siliconengel voor capillaire afname van bloed op verschillende klinisch chemische parameters - aanpak in twee instituten

Curvers J*, Stokwielder R, De Vooght KM, Boer AK*

Ned Tijdschr Klin Chem Labgeneesk 2010;35:180-182

Brule AJ van den

Acceleration of the direct identification of Staphylococcus aureus versus coagulase-negative staphylococci from blood culture material: a comparison of six bacterial DNA extraction methods

Loonen AJ, Jansz AR, Kreeftenberg H*, Bruggeman CA, Wolffs PF, van den Brule AJ*

Eur J Clin Microbiol Infect Dis. 2011 Mar;30(3):337-42. Epub 2010 Oct 24

Voor abstract zie: Kreeftenberg H

Brule AJ van den
The BRAF V600E mutation is an independent prognostic factor for survival in stage II and stage III colon
cancer patients
Fariña-Sarasqueta A, Lijnschoten G van, Moerland E, Creemers GJ*, Lemmens VE, Rutten HJ*, Brule AJ van den*
Ann Oncol. 2010;21(12):2396-402., Epub 2010 May 25
Voor abstract zie: Creemers GJ

Brule AJ van den
TS gene polymorphisms are not good markers of response to 5-FU therapy in stage III colon cancer
patients
Fariña-Sarasqueta A, Gosens MJ, Moerland E, Lijnschoten I van, Lemmens VE, Slooter GD, Rutten HJ*, Brule AJ van den*
Cell Oncol. 2010;33(1):1-11, 2010 May 6 [Epub ahead of print]
Voor abstract zie: Rutten HJ

Brule AJ van den
TS gene polymorphisms are not good markers of response to 5-FU therapy in stage III colon cancer patients
Fariña-Sarasqueta A, Gosens MJ, Moerland E, van Lijnschoten I, Lemmens VE, Slooter GD, Rutten HJ*, van den Brule AJ*
Anal Cell Pathol (Amst). 2010 Jan;33(1):1-11
Voor abstract zie: Rutten HJ

Brule AJ van den
Value of gene polymorphisms as markers of 5-FU therapy response in stage III colon carcinoma: a pilot study
Fariña-Sarasqueta A, Lijnschoten G van, Rutten HJ*, Brule AJ van den*
Cancer Chemother Pharmacol. 2010 Nov;66(6):1167-71, E-pub 2010 Jul 28
Voor abstract zie: Rutten HJ

Curvers J
Allogene trombocytengel bij urologische patiënt met een verworven trombocytopathie
Curvers J*, Koldewijn E*, Everts PA*, Peters W*, Scharnhorst V*
Ned Tijdschr Bloedtransfusie 2010;3:94-96

Applicatie van een trombocytengel kan de wondheling versnellen en het risico op complicaties (nabloeden, wondinfectie) verminderen. Deze casus betreft een patiënt met een verworven trombocytopathie, die operatief wordt behandeld voor een vergrote prostaat en blaasstenen, waarbij na de eerste operatie een gecompliceerd beloop optreedt. De patiënt heeft last van persisterende bloedingen, waarvoor enkele malen operatief stolsels uit de blaas worden geëvacueerd. In totaal ontvangt de patiënt 14 eenheden erytrocytenconcentraat en 7 eenheden vers bevroren plasma. Uiteindelijk wordt bij deze patiënt gebruik gemaakt van een trombocytengel op basis van een allogeen product (5 donoren trombocytenconcentraat), waarna geen

stolselretentie meer optreedt en de patiënt snel herstelt. Autologe donatie bij patiënten met een verworven trombocytopathie, levert geen goede trombocytengel, het gebruik van allogene trombocyten is dan een goed alternatief.

Curvers J
Autologe plaatjes-leukocyten gel: toepassing bij diverse chirurgische indicaties
Everts PA*, Everts-Koning JG*, Scharnhorst V*, Curvers J*
Ned Tijdschr Bloedtransfusie 2010;3:87-93
Voor abstract zie: Everts PA

Curvers J
Evaluation of the Ves-Matic Cube 200 erythrocyte sedimentation method: comparison with Westergrenbased methods
Curvers J*, Kooren J, Laan M, Lierop E v, Kerkhof D vd *, Scharnhorst V*, Herruer M.
Am J Clin Pathol. 2010 Oct;134(4):653-60

The erythrocyte sedimentation rate (ESR) is still a widely used parameter for acute phase inflammation. Recently, new methods based on direct undiluted measurement of ESR in a standard EDTA tube have been developed. We evaluated the analytic performance of one of these new methods, the Ves-Matic Cube 200 (Diesse Diagnostica Senese, Siena, Italy), and compared it with several established Westergren-based diluted methods. The Ves-Matic Cube 200 showed a poor correlation (r = 0.83) with the International Council for Standardization in Haematology Westergren reference method, mainly caused by a considerable negative bias at low ESR levels. Moreover, a random bias was found at higher ESR levels that correlated with hematocrit levels, suggesting a differential influence of packed cell volume on the Ves-Matic Cube 200 results compared with Westergren results. We conclude that the Ves-Matic Cube 200 method is not interchangeable with Westergren-based diluted methods and generates ESR results that are too deviant to be clinically acceptable.

Curvers J
Invloed van siliconengel voor capillaire afname van bloed op verschillende klinisch chemische parameters - aanpak in twee instituten
Curvers J*, Stokwielder R, De Vooght KMK, Boer AK*
Ned Tijdschr Klin Chem Labgeneesk 2010;35:180-182

Kerkhof D van de
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Scharnhorst V
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Scharnhorst V
Effect of duration of red blood cell storage on early and late mortality after coronary artery bypass grafting
Straten AH van*, Soliman Hamad MA*, Zundert AA*, Martens EJ*, Woorst JF*, Wolf AM, Scharnhorst V*
J Thorac Cardiovasc Surg. 2011 Jan;141(1):231-7, 2010 Jul 9. [Epub ahead of print]
Voor abstract zie: Straten AH van

Scharnhorst V
Effect of storage time of transfused plasma on early and late mortality after coronary artery bypass grafting
Straten AH van *, Soliman Hamad MA*, Martens EJ*, Tan ME*, de Wolf AM, Scharnhorst V*, van Zundert AA*
J Thorac Cardiovasc Surg. 2011 Jan;141(1):238-43.e1-2, Epub 2010 Sep 18
Voor abstract zie: Straten AH van

Scharnhorst V
Electrolyte-balanced heparin in blood gas syringes can introduce a significant bias in the measurement of positively charged electrolytes
Berkel M van *, Scharnhorst V*
Clin Chem Lab Med. 2010 Dec 14. [Epub ahead of print]
Voor abstract zie: Berkel M van

Scharnhorst V
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Curvers J*, Kooren J, Laan M, Lierop E v, Kerkhof D vd *, Scharnhorst V*, Herruer M
Am J Clin Pathol. 2010 Oct;134(4):653-60
Voor abstract zie: Curvers J

** = werkzaam in het Catharina-ziekenhuis*

Anesthesiologie

Artikelen

Buise MP
Advanced Care admission following bariatric surgery
Buise MP*, Van den Broek RJ, Zoete J P de*, Bindels AJ*
Neth J Crit Care. 2010 april;14(2): 85-91

Introduction: Obesity is a chronic disease with increasing prevalence. Bariatric surgery has proven to be an effective method for weight reduction and decreases the prevalence of various co morbidities like diabetes, hypertension, hyperlipidoemia and obstructive sleep apnoea. Search strategy: A MEDLINE/PubMed search was conducted from 1980 until July 2009 using the search terms: obesity, bariatric surgery, critical illness, Intensive Care, Post Anaesthesia Care Unit, Medium Care and Advanced Care. Summary of findings: Four original studies and one abstract were found. The risk factors for ICU admission and prolonged mechanical ventilation were discussed. Conclusion: There are differences between Europe and the USA in the preferred type of bariatric surgery performed. There are also national and local differences between the organization and logistics of advanced care following bariatric surgery. Therefore, it is difficult to compare the literature on this subject. Almost all risk factors for advanced care admission following bariatric surgery are related to extreme weight; most of them are also related to age. Additionally, a need for extended mechanical ventilation en thus advanced care may be warranted in the following patients: males, heavier patients, those with pulmonary co morbidity and those in need of reoperation. Surgeons, anaesthesiologists and intensivists have to create clinical pathways both for the institute where they are working and their patients.

Buise MP
The effects of intravenous nitroglycerine and norepinephrine on gastric microvascular perfusion in an experimental model of gastric tube reconstruction
Bommel J van, Jonge J de, P Buise M*, Specht P, Genderen M van, Gommers D
Surgery 2010 Jul;148(1):71-7, Epub 2010 Feb 10

BACKGROUND: Esophagectomy with gastric tube reconstruction is the surgical treatment for cancer of the esophagus. Perfusion of the anastomotic site of the tube depends exclusively on microcirculation, making it susceptible to hypoperfusion. It is unknown whether vasodilatation is superior to increased perfusion pressure to improve gastric tissue perfusion of the anastomosis. METHODS: We performed a gastric tube reconstruction in 12 pigs, mean body weight 32 +/- 2 kg. Besides systemic hemodynamic parameters, gastric microvascular blood flow (MBF) was assessed with laser Doppler flowmetry and gastric microvascular HbO(2) saturation (muHbSO(2)) and Hb concentration (muHbcon) with spectrophotometry. Animals were randomized over 2 groups: with and without intravenous nitroglycerin (NTG). In both groups mean arterial pressure (MAP) was increased from 50 to 110 mmHg with infusion of norepinephrine; in the NTG group central venous pressure was maintained below 10 mmHg throughout the experiment with NTG. RESULTS: Except for central venous and pulmonary capillary wedge pressures, all hemodynamic parameters were similar in both groups. Especially in corpus and fundus, MBF

decreased following surgery. However, overall MBF was significantly higher in the NTG group. Increasing MAP had no effect on fundus MBF. Gastric muHbSO(2) and muHbcon were not different between groups and did not change at higher MAP levels. CONCLUSION: In our experimental model of gastric tube reconstruction, tissue perfusion is severely compromised; this effect is aggravated by systemic hypotension independent from cardiac output. Impaired venous outflow might contribute to this effect and can be counteracted with infusion of nitroglycerine.

Ham WG van der
The anatomy of the thoracic spinal canal in different postures: a magnetic resonance imaging investigation
Lee RA, Zundert AA van*, Botha CP, Lataster LM, Zundert TC van* , Ham WG van der*, Wieringa PA
Reg Anesth Pain Med. 2010 Jul-Aug;35(4):364-9
Voor abstract zie: Zundert AA van

Herold I
Hypotonic and isotonic fluid overload as a complication of hysteroscopic procedures: two case reports
Kruchten PM van*, Vermelis JM, Herold I*, Zundert AA van*
Minerva Anestesiol. 2010 May;76(5):373-7
Voor abstract zie: Kruchten PM van

Korsten EH
Reasons for discontinuation of medication during hospitalization and documentation thereof: a descriptive study of 400 geriatric and internal medicine patients
Linden CM van der*, Jansen PA, Geerenstein EV van, Marum RJ van, Grouls RJ*, Egberts TC, Korsten EH*
Arch Intern Med. 2010 Jun 28;170(12):1085-7
Voor abstract zie: Linden CM van der

Korsten EH
Recurrence of adverse drug reactions following inappropriate re-prescription: better documentation, availability of information and monitoring are needed
Linden CM van der *, Jansen PA, Marum RJ van, Grouls RJ*, Korsten EH*, Egberts AC
Drug Saf. 2010 Jul 1;33(7):535-8
Voor abstract zie: Linden CM van der

Korsten EH
Using a clinical decision support system to determine the quality of antimicrobial dosing in intensive care patients with renal insufficiency
Helmons PJ*, Grouls RJ*, Roos AN*, Bindels AJ*, Wessels-Basten SJ*, Ackerman EW*, Korsten EH*
Qual Saf Health Care 2010;19(1):22-6
Voor abstract zie: Helmons PJ

Kruchten PM van

Hypotonic and isotonic fluid overload as a complication of hysteroscopic procedures: two case reports

Kruchten PM van*, Vermelis JM, Herold I*, Zundert AA van*

Minerva Anestesiol. 2010 May;76(5):373-7

Hysteroscopy is used extensively for both the diagnosis and treatment of intrauterine pathology. Although considered a safe procedure, complications such as cervical laceration, uterine perforation, absorption of irrigation solutions and, rarely, gas or air embolism may occur. The authors present two cases with successful outcomes, whereby complications following hysteroscopy occurred due to excessive fluid absorption. Hypotonic as well as isotonic distention media can cause serious complications. The authors focus on factors that may increase the risk of fluid overload, which should be known to both anesthesiologists and gynecologists

Maassen R

Correspondence: Comparison of the C-MAC(®) videolaryngoscope with the Macintosh, Glidescope(®) and Airtraq(®) laryngoscopes in easy and difficult laryngoscopy scenarios in manikins

Maassen R*, Zundert AA van *

Anaesthesia. 2010 Sep;65(9):955

Meeusen V

Composition of the anaesthesia team: a European survey

Meeusen V*, Zundert A van*, Hoekman J, Kumar C, Rawal N, Knape H.

Eur J Anaesthesiol. 2010 Sep;27(9):773-9, 2010 Jul 27. [Epub ahead of print]

BACKGROUND AND OBJECTIVE: The anaesthesia workforce in Europe is understaffed and may not meet the growing demands of surgery. In many European countries where responsibilities can be identified and a varying degree of task substitution occurs, the anaesthesia service is provided by a team of physician and nonphysician anaesthesia members. This study assesses the availability, as well as the roles and functions, of nonphysician anaesthesia team members in European countries. METHODS: A survey was carried out to examine differences in anaesthesia practices and the strength of the anaesthesia workforce in Europe. A questionnaire, seeking information about perioperative anaesthesia input by nonphysician anaesthesia team members, was sent to all the national representatives of the Union of European Medical Specialists Anaesthesiology section and the International Federation of Nurse Anaesthetists. RESULTS: The responses to the questionnaire revealed that each European country has its own unique type of nonphysician anaesthesia team member and the roles of these vary substantially. Their levels of organisation vary from country to country and whereas nurse anaesthetists are often well organised, circulation nurses are not. CONCLUSION: The present study demonstrated the heterogeneity and variety of anaesthesia practices throughout Europe. Standardisation of the training and practice of European nurse anaesthetists is desirable for patient safety and quality of care if they seek to work in more than one European country. Those countries that anticipate a shortfall in the supply of anaesthesiologists should examine working models from other countries that currently work with fewer physicians and more nurse anaesthetists.

Meeusen V

Successful use of videolaryngoscopy in an adult patient with acute epiglottitis: a case report

Vermelis AM, Mateijsen N, Giebelen D, Meeusen V*, Wong DT, van Zundert AA*

Acta Anaesthesiol Belg. 2010;61(2):67-70

Acute epiglottitis is a potentially life-threatening infection of the supraglottic structures, which can lead to sudden, fatal airway obstruction. Different techniques have been described to facilitate tracheal intubation in acute epiglottitis. We describe the successful intubation, with the help of the videolaryngoscope, of a 60-year-old female with acute epiglottitis. On admission the patient was ill and severely distressed, sitting in the upright position, drooling saliva, showing severe inspiratory stridor, hyperventilation, but no trismus. Intubation was performed in OR conditions with difficult intubation equipment including fiberoptic bronchoscope, videolaryngscope, laryngeal mask airway and surgical tracheostomy ready for use. After pre-oxygenation for three minutes with 100% oxygen with the patient still in the sitting position, induction was performed with 250 mg propofol i.v. The patient was subsequently positioned supine. Face mask ventilation was successful with capnographic tracing and 100 mg succinylcholine was administered. Videolaryngoscopy was performed and a red, swollen epiglottitis with pin point lumen was seen. Intubation with a 5 mm microlarynx tube was successful at the first attempt. This is the first case describing intubation using videolaryngoscopy in an adult patient with acute epiglottitis. Videolaryngoscopy has already proven to be an excellent intubation device in normal and difficult airways. Direct laryngoscopy in patients with epiglottitis may be difficult due to the swelling and distortion of the airway. This case report shows that videolaryngoscopy is a good alternative intubation device option in adults with acute epiglottitis. Nevertheless, all other precautions (difficult airway trolley, surgical tracheostomy) need to be ready for immediate use.

Meeusen V

Burnout, psychosomatic symptoms and job satisfaction among Dutch nurse anaesthetists: a survey

Meeusen V*, Dam K van, Brown-Mahoney C, Zundert AA van*, Knape H

Acta Anaesthesiol Scand. 2010;54(5):616-21. , Epub 2010 Feb 17

Background: To meet the increasing demand for healthcare providers, it is crucial to recruit and retain more nurse anaesthetists (NAs). The majority of NAs in the Netherlands are >45 years old, and retaining them in their jobs is very important. This study investigates the relationships among burnout, physical health and job satisfaction among Dutch NAs. Methods: Two thousand NAs working in Dutch hospitals were invited to participate in this online questionnaire. We tested the relationships among burnout, psychosomatic symptoms, sickness absence, perceived general health and job satisfaction. Results: Nine hundred and twenty-three questionnaires were completed and analysed (46% response rate). Burnout and psychosomatic symptoms were negatively associated with job satisfaction, and predicted 27% of job satisfaction. Perceived general health was positively and sickness absence was negatively related to job satisfaction. Older NAs had a higher incidence of burnout than their younger counterparts. Conclusions: The results

confirmed the importance of a healthy psychosocial work environment for promoting job satisfaction. To prevent burnout, further research is necessary to determine the factors causing stress. These findings may also apply to anaesthesiologists who share many tasks and work in close cooperation with NAs.

Meeusen VC

Job satisfaction amongst Dutch nurse anaesthetists: the influence of emotions on events

Meeusen VC*, van Dam K, van Zundert AA*, Knape J

Int Nurs Rev. 2010 Mar;57(1):85-91

BACKGROUND: An ageing population, combined with a shortage of health-care professionals, can result in a decrease in the capacity of health-care systems. Therefore, it is important to explore possible solutions for this problem. By finding methods to increase job satisfaction, it may be possible to retain employees within their profession. In this study, we examined events, their influence on emotions and, consequently, the effect of these emotions on job satisfaction. We attempted to answer the question: Which events and emotions influence job satisfaction? METHODS: We collected data on events and emotions, and their effects on job satisfaction, amongst Dutch nurse anaesthetists. Participants (n = 314) were asked to complete two questionnaires about events, emotions and job satisfaction at two different times during an average working day. RESULTS: One hundred thirty-two nurse anaesthetists from 24 Dutch hospitals participated. Both positive and negative events were significant in the development of positive and negative emotions at the end of the working day. Positive emotions at the end of the working day contributed significantly to job satisfaction. Negative emotions did not have a significant effect on job satisfaction. CONCLUSIONS: The mediating role of positive emotions in relation to positive and negative events should be taken into account in managing job satisfaction amongst Dutch nurse anaesthetists. Further research is necessary to determine whether the relationship between events and emotions provides a foundation for developing a more positive working atmosphere, and also to explore how hospitals can trigger positive emotions to increase job satisfaction.

Meeusen VC

Personality dimensions and their relationship with job satisfaction amongst dutch nurse anaesthetists

Meeusen VC*, Brown-Mahoney C, Dam K van, Zundert AA van*, Knape JT.

J Nurs Manag. 2010 Jul;18(5):573-81.,

Personality dimensions and their relationship with job satisfaction amongst dutch nurse anaesthetists Aim This study investigates the relationship between personality dimensions and job satisfaction. Background The shortage of nurses, and those voluntarily leaving their jobs, continues to be a problem affecting the delivery of healthcare all over the world, including anaesthesia. If it is found that nurse anaesthetists with certain personality types have high levels of job satisfaction, the information may be helpful for the retention of nurse anaesthetists. Methods A questionnaire was distributed amongst Dutch nurse anaesthetists. Factor and multiple regression analyses were performed to reveal personality dimensions and their impact on job satisfaction. Results Nine hundred and twenty-three

questionnaires were completed and analysed (46% response rate). Two personality dimensions -'easy going' and 'orderly'- explained 3.5% of the variance in job satisfaction. Conclusion Personality dimensions as measured with the Myers-Briggs Type Indicator (MBTI) are only minimally relevant in predicting job satisfaction amongst Dutch nurse anaesthetists. Implications for nursing management Before using personality traits as a selection tool for retaining employees, it is important to understand the relationship of particular personalities to job satisfaction; it is also important to know which combination of personality traits is likely to create a highly cohesive work group.

Suijlekom JA van
Impact van apotheekinterventies op de medicatieveiligheid door introductie van de klinische beslisregel 'opioïde-laxans gebruik' in het ziekenhuis
Doppen AM*, Scheepers-Hoeks AM*, Suijlekom JA van*, Creemers GJ*, Ackerman EW*, Wessels-Basten SJ*, Grouls RJ*
PW Wetenschappelijk Platform. 2010;4(10):172-176

Verelst P
Ultrasound-guided popliteal block shortens onset time compared to prebifurcation sciatic block
Verelst P*, van Zundert A*
Reg Anesth Pain Med. 2010 Nov;35(6):565-6; author reply 566
Comment on: Reg Anesth Pain Med. 2010 May-Jun;35(3):267-71

Vermelis JM
Hypotonic and isotonic fluid overload as a complication of hysteroscopic procedures: two case reports
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Voor abstract zie: Kruchten PM

Zundert AA van
Burnout, psychosomatic symptoms and job satisfaction among Dutch nurse anaesthetists: a survey
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Acta Anaesthesiol Scand. 2010 May;54(5):616-21. , Epub 2010 Feb 17
Voor abstract zie: Meeusen VC

Zundert A van
Carl Koller Gold Medal Award to Dag Selander atThe 27th Annual Congress of the European Society of Regional Anaesthesia and Pain Therapy; Genoa, Italy; September 24-27, 2008
Zundert A van*
Reg Anesth Pain Med. 2010;35(1): 106-7

Zundert AA van
Carl Koller Gold Medal Award to Barrie Fischer at the 28th Annual Congress of the European Society of Regional Anaesthesia and Pain Therapy, Salzburg, Austria, September 9-12, 2009
van Zundert A*
Reg Anesth Pain Med. 2010 Nov;35(6):544

Zundert AA van
Composition of the anaesthesia team: a European survey
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Correspondence: Comparison of the C-MAC(®) videolaryngoscope with the Macintosh, Glidescope(®) and Airtraq(®) laryngoscopes in easy and difficult laryngoscopy scenarios in manikins
Maassen R*, Van Zundert AA*
Anaesthesia. 2010 Sep;65(9):955

Zundert AA van
Downfolding of the epiglottis during intubation
Zundert A van*, Zundert T van, Brimacombe J
Anesth Analg. 2010 Apr;110(4):1246-7

Zundert AA van
Effect of body mass index on early and late mortality after coronary artery bypass grafting
Straten AH van*, Bramer S*, Soliman Hamad MA*, Zundert AA van*, Martens EJ*, Schönberger JP*, Wolf AM de
Ann Thorac Surg. 2010;89(1): 30-7
Voor abstract zie: Straten AH van

Zundert AA
Effect of duration of red blood cell storage on early and late mortality after coronary artery bypass grafting
Straten AH van*, Soliman Hamad MA*, Zundert AA*, Martens EJ*, Woorst JF*, Wolf AM, Scharnhorst V*
J Thorac Cardiovasc Surg. 2011 Jan;141(1):231-7, 2010 Jul 9 [Epub ahead of print]
Voor abstract zie: Straten AH van

Zundert AA van
Evaluation of the EuroSCORE risk scoring model for patients undergoing coronary artery bypass graft surgery: a word of caution
van Straten AH*, Tan EM*, Hamad MA*, Martens EJ*, Zundert AA van*
Neth Heart J. 2010 Aug;18(7-8):355-9
Voor abstract zie: Straten AH van

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Hypotonic and isotonic fluid overload as a complication of hysteroscopic procedures: two case reports
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Minerva Anestesiol. 2010 May;76(5):373-7
Voor abstract zie: Kruchten PM van

Zundert AA van
In memoriam Albert van Steenberge (31.07.1925-23.09.2010).
Zundert A van*, Rawal N, van de Velde M, de Andrés J, Rettig H
Acta Anaesthesiol Belg 2010;61:111-2

Zundert AA van
Peripheral Vascular Disease as a Predictor of Survival After Coronary Artery Bypass Grafting: Comparison With a Matched General Population
Straten AH van*, Firanescu C*, Soliman Hamad MA*, Tan ME, Woorst JF ter*, Martens EJ*, Zundert AA van*
Ann Thorac Surg. 2010;89(2):414-20
Voor abstract zie: Straten AH van

Zundert AA van
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Meeusen VC*, Brown-Mahoney C, Dam K van, Zundert AA van*, Knape JT
J Nurs Manag. 2010 Jul;18(5):573-81
Voor abstract zie: Meeusen VC

Zundert AA van
Platelet leukocyte gel facilitates bone substitute growth and autologous bone growth in a goat model
Everts PA*, Delawi D, Mahoney CB, Erp A van*, Overdevest EP*, Zundert A van*, Knape JT, Dhert WJ
J Biomed Mater Res A. 2010;92(2):746-53
Voor abstract zie: Everts PA

Zundert AA van

Preoperative Atrial Fibrillation and Elevated C-Reactive Protein Levels as Predictors of Mediastinitis After Coronary Artery Bypass Grafting

Elenbaas TW*, Soliman Hamad MA*, Schönberger JP*, Martens EJ*, Zundert AA van*, Straten AH van*

Ann Thorac Surg. 2010;89(3): 704-9

Voor abstract zie: Elenbaas TW

Zundert AA van

Preoperative ejection fraction as a predictor of survival after coronary artery bypass grafting: comparison with a matched general population

Soliman Hamad MA*, van Straten AH*, Schönberger JP*, ter Woorst JF*, de Wolf AM, Martens EJ*, van Zundert AA*

J Cardiothorac Surg. 2010 Apr 23;5:29

Voor abstract zie: Soliman Hamad MA

Zundert AA van

Preoperative Prediction of Early Mortality in Patients with Low Ejection Fraction Undergoing Coronary Artery Bypass Grafting

Soliman Hamad MA*, Van Straten AH*, Van Zundert AA*, Ter Woorst JF*, Martens EJ, Penn OC*

J Card Surg. 2011 Jan;26(1):9-15, 2010 Nov 14 [Epub ahead of print]

Voor abstract zie: Soliman Hamad MA

Zundert AA van

Risk Factors for Red Blood Cell Transfusion After Coronary Artery Bypass Graft Surgery

Straten AH van*, Kats S*, Bekker MW*, Verstappen F*, Woorst JF ter*, Zundert A van*, Soliman Hamad MA*

J Cardiothorac Vasc Anesth. 2010;24:413-7

Voor abstract zie: Straten AH van

Zundert AA van

Successful use of videolaryngoscopy in an adult patient with acute epiglottitis: a case report

Vermelis AM, Mateijsen N, Giebelen D, Meeusen V*, Wong DT, van Zundert AA*

Acta Anaesthesiol Belg. 2010;61(2):67-70

Voor abstract zie: Meeusen VC

Zundert AA van

The anatomy of the thoracic spinal canal in different postures: a magnetic resonance imaging investigation

Lee RA, Zundert AA van*, Botha CP, Lataster LM, Zundert TC van* , Ham WG van der*, Wieringa PA

Reg Anesth Pain Med. 2010 Jul-Aug;35(4):364-9

BACKGROUND AND OBJECTIVES: The goal of this study was to investigate,with magnetic resonance imaging, the human anatomic positions of the spinal canal (eg,

spinal cord, thecal tissue) in various postures and identify possible implications from different patient positioning for neuraxial anesthetic practice. METHOD: Nine volunteers underwent magnetic resonance imaging in supine, laterally recumbent, and sitting (head-down) positions. Axial and sagittal slices of the thoracic and lumbar spine were measured for the relative distances between anatomic structures, including dura mater and spinal cord. RESULTS: The posterior dura-spinal cord (midline) distance is on average greater than the anterior dura-spinal cord (midline) distance along the thoracic spinal column, irrespective of volunteer postures (P G 0.05).The separation of the dura mater and spinal cord is greatest posterior in the middle thoracic region compared with upper and lower thoracic levels for all postures of the volunteers (P G 0.05). By placing the patient in a head-down sitting posture (as commonly done in epidural and spinal anesthesia), the posterior separation of the dura mater and spinal cordis increased. CONCLUSIONS: The spinal cord follows the straightest line through the imposed geometry of the spinal canal. Accordingly, there is relatively more posterior separation of the cord and surrounding thecal tissue at midthoracic levels in the apex of the thoracic kyphosis. Placing a patient in a position that accentuates the thoracic curvature of the spine (ie,sitting head-down) increases the posterior separation of the spinal cord and dural sheath at thoracic levels.

Zundert, A van

Ultrasound-guided popliteal block shortens onset time compared to prebifurcation sciatic block

Verelst P*, van Zundert A*.

Reg Anesth Pain Med. 2010 Nov;35(6):565-6; author reply 566

Comment on: Reg Anesth Pain Med. 2010 May-Jun;35(3):267-71

Zundert TC van

The anatomy of the thoracic spinal canal in different postures: a magnetic resonance imaging investigation

Lee RA, Zundert AA van*, Botha CP, Lataster LM, Zundert TC van* , Ham WG van der*, Wieringa PA

Reg Anesth Pain Med. 2010 Jul-Aug;35(4):364-9

Voor abstract zie: Zundert AA van

** = werkzaam in het Catharina-ziekenhuis*

Apotheek

Artikelen

Ackerman EW
Impact van apotheekinterventies op de medicatieveiligheid door introductie van de klinische beslisregel 'opioïde-laxans gebruik' in het ziekenhuis
Doppen AM*, Scheepers-Hoeks AM*, Suijlekom JA van*, Creemers GJ*, Ackerman EW*, Wessels- Basten SJ*, Grouls RJ*
PW Wetenschappelijk Platform. 2010;4(10):172-176

Ackerman EW
Using a clinical decision support system to determine the quality of antimicrobial dosing in intensive care patients with renal insufficiency
Helmons PJ*, Grouls RJ*, Roos AN*, Bindels AJ*, Wessels-Basten SJ*, Ackerman EW*, Korsten EH*
Qual Saf Health Care 2010;19(1):22-6
Voor abstract zie: Helmons PJ

Broeke R ten
Ustekinumab veelbelovend bij psoriasis.
Broeke R ten
Pharm. Weekblad, 2010;(33/34):28-30
Ustekinumab is de eerste vertegenwoordiger van een nieuwe groep van biologicals bij psoriasis. Dit middel heeft een ander werkingsmechanisme dan de huidige biologicals en is geregistreerd voor behandeling van plaque psoriasis.

Doppen AM
Impact van apotheekinterventies op de medicatieveiligheid door introductie van de klinische beslisregel 'opioïde-laxans gebruik' in het ziekenhuis
Doppen AM*, Scheepers-Hoeks AM*, Suijlekom JA van*, Creemers GJ*, Ackerman EW*, Wessels-Basten SJ*, Grouls RJ*
PW Wetenschappelijk Platform. 2010;4(10):172-176

Grouls RJ
Impact van apotheekinterventies op de medicatieveiligheid door introductie van de klinische beslisregel 'opioïde-laxans gebruik' in het ziekenhuis
Doppen AMJ, Scheepers-Hoeks AMJW, Suijlekom JA van, Creemers GJ, Ackerman EW, Wessels-Basten SJ, Grouls RJE
PW Wetenschappelijk Platform. 2010;4(10):172-176

Grouls RJ
Het opstellen van een landelijk geldende clinical rule: evaluatie van de werkwijze aan de hand van de clinical rule clozapine.
E. Meuwese, S.J.W. Wessels-Basten*, A.M.J.W. Scheepers-Hoeks*, H. Chao, R.J.E. Grouls*
Psyfar 2010;(2):12-19

Grouls RJ

Reasons for discontinuation of medication during hospitalization and documentation thereof: a descriptive study of 400 geriatric and internal medicine patients

Linden CM van der*, Jansen PA, Geerenstein EV van, Marum RJ van, Grouls RJ*, Egberts TC, Korsten EH*

Arch Intern Med. 2010 Jun 28;170(12):1085-7

Grouls RJ

Recurrence of adverse drug reactions following inappropriate re-prescription: better documentation, availability of information and monitoring are needed.

Linden CM van der *, Jansen PA, Marum RJ van, Grouls RJ*, Korsten EH*, Egberts AC

Drug Saf. 2010 Jul 1;33(7):535-8

Voor abstract zie: Linden CM van der

Grouls RJ

Using a clinical decision support system to determine the quality of antimicrobial dosing in intensive care patients with renal insufficiency

Helmons PJ*, Grouls RJ*, Roos AN*, Bindels AJ*, Wessels-Basten SJ*, Ackerman EW*, Korsten EH*

Qual Saf Health Care 2010;19(1):22-6

Voor abstract zie: Helmons PJ

Harmsze AM

Sulfonylureas and on-clopidogrel platelet reactivity in type 2 diabetes mellitus patients

Harmsze AM*, Van Werkum JW, Moral F, Ten Berg JM, Hackeng CM, Klungel OH, De Boer A, Deneer VH

Platelets. 2010 Dec 8 [Epub ahead of print]

Clopidogrel is a prodrug that needs to be converted in vivo by several cytochrome (CYP) P450 isoenzymes to become active. Both clopidogrel and the oral hypoglycemic drug class sulfonylureas are metabolized by the iso-enzyme CYP2C9. The objective of the study was to evaluate the relationship of sulfonylureas and on-clopidogrel platelet reactivity in type 2 diabetes mellitus patients undergoing elective coronary stent implantation. In this prospective, observational study, on-clopidogrel platelet reactivity was quantified using adenosine diphosphate (ADP)-induced light transmittance aggregometry in 139 type 2 diabetes mellitus patients undergoing elective coronary stent implantation treated with clopidogrel and aspirin. High on-clopidogrel platelet reactivity was defined as >70.7% platelet reactivity to 20_µmol/L ADP. A total of 53 patients (38.1%) were on concomitant treatment with sulfonylureas. The remaining 86 patients were on other hypoglycemic drugs. On-clopidogrel platelet reactivity was significantly higher in patients with concomitant sulfonylurea treatment as compared to patients without concomitant sulfonylurea treatment (for 5_µmol/L ADP: 46.0%_±_11.8 vs. 40.6%_±_16.0; p_=_0.035, adjusted p_=_0.032 and for 20_µmol/L ADP: 64.6%_±_10.8 vs. 58.7%_±_15.5; p_=_0.019, adjusted p_=_0.017). The concomitant use of sulfonylureas was associated with a 2.2-fold increased risk of high on-clopidogrel platelet reactivity (OR

2.2, 95% CI 1.1-4.7, p_=_0.039 and after adjustment for confounders: OR(adj) 2.0, 95% CI 1.0-5.7, p_=_0.048). Concomitant treatment with sulfonylureas might be associated with decreased platelet inhibition by clopidogrel in type 2 diabetes mellitus patients on dual antiplatelet therapy undergoing elective coronary stent implantation.

Harmsze AM

Comparison of platelet function tests in predicting clinical outcome in patients undergoing coronary stent implantation

Breet NJ, van Werkum JW, Bouman HJ, Kelder JC, Ruven HJ, Bal ET, Deneer VH, Harmsze AM*, van der Heyden JA, Rensing BJ, Suttorp MJ, Hackeng CM, ten Berg JM

JAMA. 2010;303:754-62

CONTEXT: High on-treatment platelet reactivity is associated with atherothrombotic events following coronary stent implantation. OBJECTIVE: To evaluate the capability of multiple platelet function tests to predict clinical outcome. DESIGN, SETTING, AND PATIENTS: Prospective, observational, single-center cohort study of 1069 consecutive patients taking clopidogrel undergoing elective coronary stent implantation between December 2005 and December 2007. On-treatment platelet reactivity was measured in parallel by light transmittance aggregometry, VerifyNow P2Y12 and Plateletworks assays, and the IMPACT-R and the platelet function analysis system (PFA-100) (with the Dade PFA collagen/adenosine diphosphate [ADP] cartridge and Innovance PFA P2Y). Cut-off values for high on-treatment platelet reactivity were established by receiver operating characteristic curve analysis. MAIN OUTCOME MEASUREMENT: The primary end point was defined as a composite of all-cause death, nonfatal acute myocardial infarction, stent thrombosis, and ischemic stroke. The primary safety end point included TIMI (Thrombolysis In Myocardial Infarction) criteria major and minor bleeding. RESULTS: At 1-year follow-up, the primary end point occurred more frequently in patients with high ontreatment platelet reactivity when assessed by light transmittance aggregometry (11.7%; 95% confidence interval [CI], 8.9%-15.0% vs 6.0%; 95% CI, 4.2%-8.2%; P < .001), VerifyNow (13.3%; 95% CI, 10.2%-17.0% vs 5.7%; 95% CI, 4.1%-7.8%; P < .001) and Plateletworks (12.6%; 95% CI, 8.8% -17.2% vs 6.1%; 95% CI, 3.8%-9.2%; P = .005), which also had modest ability to discriminate between patients having and not having a primary event: light transmittance aggregometry (area under the curve [AUC], 0.63; 95% CI, 0.58-0.68), VerifyNow (AUC, 0.62; 95% CI, 0.57-0.67), and Plateletworks (AUC, 0.61; 95% CI, 0.53-0.69). The IMPACT-R, Dade PFA collagen/ADP, and Innovance PFA P2Y were unable to discriminate between patients with and without primary end point at 1-year follow-up (all AUCs included 0.50 in the CI). None of the tests identified patients at risk for bleeding. CONCLUSIONS: Of the platelet function tests assessed, only light transmittance aggregometry, VerifyNow, and Plateletworks were significantly associated with the primary end point. However, the predictive accuracy of these tests was only modest. None of the tests provided accurate prognostic information to identify low-risk patients at higher risk of bleeding following stent implantation

Harmsze AM

CYP2C19*2 and CYP2C9*3 alleles are associated with stent thrombosis: a case-control study

Harmsze AM*, van Werkum JW, Ten Berg JM, Zwart B, Bouman HJ, Breet NJ, van 't Hof AW, Ruven HJ, Hackeng CM, Klungel OH, de Boer A, Deneer VH

Eur Heart J. 2010;31:3046-53

AIMS: despite treatment with clopidogrel on top of aspirin, stent thrombosis (ST) still occurs being the most serious complication after percutaneous coronary interventions (PCIs). In this study, we aimed to determine the effect of variations in genes involved in the absorption (ABCB1 C1236T, G2677T/A, C3435T), metabolism (CYP2C19*2 and *3, CYP2C9*2 and *3, CYP3A4*1B and CYP3A5*3), and pharmacodynamics (P2Y1 A1622G) of clopidogrel on the occurrence of ST. METHODS AND RESULTS: the selected genetic variants were assessed in 176 subjects who developed ST while on dual antiplatelet therapy with aspirin and clopidogrel and in 420 control subjects who did not develop adverse cardiovascular events, including ST, within 1 year after stenting. The timing of the definite ST was acute in 66, subacute in 87, and late in 23 cases. The presence of the CYP2C19*2 and CYP2C9*3 variant alleles was significantly associated with ST (OR(adj): 1.7, 95% CI: 1.0-2.6, P = 0.018 and OR(adj): 2.4, 95% CI: 1.0-5.5, P = 0.043, respectively). The influence of CYP2C19*2 (OR(adj): 2.5, 95% CI: 1.1-5.5, P = 0.026) and CYP2C9*3 (OR(adj): 3.3, 95% CI: 1.1-9.9, P = 0.031) was most strongly associated with subacute ST. No significant associations of the other genetic variations and the occurrence of ST were found. CONCLUSION: carriage of the loss-of-function alleles CYP2C19*2 and CYP2C9*3 increases the risk on ST after PCI.

Harmsze AM

The use of amlodipine, but not of P-glycoprotein inhibiting calcium channel blockers is associated with clopidogrel poor-response

Harmsze AM*, Robijns K, van Werkum JW, Breet NJ, Hackeng CM, Ten Berg JM, Ruven HJ, Klungel OH, de Boer A, Deneer VH

Thromb Haemost.2010;103:920-5

Clopidogrel is a prodrug that has to be converted in vivo to its active metabolite by cytochrome (CYP) P450 iso-enzymes. As calcium channel blockers (CCBs) are inhibitors of CYP3A4, concomitant use of these drugs might play a role in the wide inter-individual variability in the response to clopidogrel. However, some CCBs also have strong inhibitory effects on the drug transporter P-glycoprotein (Pgp), which mediates clopidogrel's intestinal absorption. It was the aim of this study to evaluate the effect of co-administration of Pgp-inhibiting and non-Pgp-inhibiting CCBs on on-clopidogrel platelet reactivity in patients on dual antiplatelet therapy undergoing elective percutaneous coronary intervention (PCI). In a total of 623 consecutive patients undergoing elective PCI treated with clopidogrel and aspirin, platelet reactivity to 5 and 20 muM adenosine diphospate (ADP) and clopidogrel poor-response (defined as > 70% platelet aggregation to 20 muM ADP) were evaluated by light transmittance aggregometry. A total of 222 patients (35.6%) were on CCB treatment, of which 98 used Pgp-inhibiting CCBs (verapamil, nifedipine, diltiazem, barnidipine) and 124 patients used the non-Pgp-inhibiting CCB amlodipine. Adjusted mean ADP-induced on-clopidogrel platelet reactivity was significantly higher in both

users of Pgp-inhibiting CCBs and amlodipine as compared to CCB non-users (all p<0.05). However, only the use of amlodipine was significantly associated with a 2.3-fold increased risk of clopidogrel poor-response. This study demonstrates that concomitant use of Pgp-inhibiting CCBs and amlodipine increases onclopidogrel platelet reactivity. Only amlodipine was associated with clopidogrel poor-response. The drugdrug interaction between clopidogrel and amlodipine might be more clinically relevant as compared to Pglycoprotein- inhibiting CCBs.

Helmons PJ

Using a clinical decision support system to determine the quality of antimicrobial dosing in intensive care patients with renal insufficiency

Helmons PJ*, Grouls RJ*, Roos AN*, Bindels AJ*, Wessels-Basten SJ*, Ackerman EW*, Korsten EH*

Qual Saf Health Care 2010;19(1):22-6

Background The benefits on clinical practice of a clinical decision support system (CDSS) are predominantly determined by the quality of the clinical rules used in this system. Therefore, it is essential to investigate the performance and potential benefits on quality of care of these rules. Methods A clinical rule assisting physicians in selecting the appropriate dosage according to renal function of frequently prescribed antimicrobials was developed. In 2004, 1788 patients admitted to the intensive care unit (ICU) for more than 12 h were included in this retrospective study. The actual number of dosage adjustments without the support of the CDSS was compared with the theoretical number of dosage adjustments determined by the clinical rule in patients with moderate (creatinine clearance (Cl(creat)) 10 -50 ml/min) and severe (Cl(creat) <10 ml/min) renal dysfunction. If dosage adjustment was omitted, the duration of excessive anti-infective dosing and extra drug costs involved was determined. Results Dosage adjustment of antimicrobials was omitted in 163 patients (86%) with moderate renal failure and 13 patients (54%) with severe renal failure. Excessive exposure was most frequently detected in patients receiving fluconazole and ciprofloxacin (median duration of 6 days). In our ICU alone, more than euro16 000 ($19 000) can be saved annually by adjusting the dosage according to renal function of frequently prescribed antimicrobials. Conclusions Despite intensive monitoring of patients in the ICU, dosage adjustment of antimicrobials is often omitted. Implementing this clinical rule has the potential to contribute to a significant improvement in medication safety and is expected to generate substantial savings.

Scheepers-Hoeks AM

Impact van apotheekinterventies op de medicatieveiligheid door introductie van de klinische beslisregel 'opioïde-laxans gebruik' in het ziekenhuis

Doppen AM*, Scheepers-Hoeks AM*, Suijlekom JA van*, Creemers GJ*, Ackerman EW*, Wessels-Basten SJ*, Grouls RJ*

PW Wetenschappelijk Platform 2010;4(10):172-76

Scheepers-Hoeks AM

Het opstellen van een landelijk geldende clinical rule: evaluatie van de werkwijze aan de hand van de clinical rule clozapine

E. Meuwese, S.J.W. Wessels-Basten*, A.M.J.W. Scheepers-Hoeks*, H. Chao, R.J.E. Grouls*

Psyfar 2010;(2):12-19

Wessels-Basten SJ

Impact van apotheekinterventies op de medicatieveiligheid door introductie van de klinische beslisregel 'opioïde-laxans gebruik' in het ziekenhuis

Doppen AMJ, Scheepers-Hoeks AMJW, Suijlekom JA van, Creemers GJ, Ackerman EW, Wessels-Basten SJ, Grouls RJE

PW Wetenschappelijk Platform 2010;4(10):172-76

Wessels-Basten SW

Het opstellen van een landelijk geldende clinical rule: evaluatie van de werkwijze aan de hand van de clinical rule clozapine

E. Meuwese, S.J.W. Wessels-Basten*, A.M.J.W. Scheepers-Hoeks*, H. Chao, R.J.E. Grouls*

Psyfar 2010;(2):12-9

Wessels-Basten SJ

Using a clinical decision support system to determine the quality of antimicrobial dosing in intensive care patients with renal insufficiency

Helmons PJ*, Grouls RJ*, Roos AN*, Bindels AJ*, Wessels-Basten SJ*, Ackerman EW*, Korsten EH*

Qual Saf Health Care 2010;19(1):22-6

Voor abstract zie: Helmons PJ

Boek

Wessels-Basten SJ

Multidisciplinaire richtlijn Depressie, herziening van CBO richtlijn, versie 2010

Werkgroep Multidisciplinaire richtlijnontwikkeling Angststoornissen/Depressie (de Richtlijnwerkgroep)

Utrecht : Trimbos-instituut, 2010

** = werkzaam in het Catharina-ziekenhuis*

Cardiologie

Artikelen

Bracke FA
Extraction of a coronary sinus atrioverter and a dual-coil ventricular shock lead from the same patient: a tailored approach
Gelder BM van*, Bracke FA*
Europace. 2010 Nov 24 [Epub ahead of print]
Voor abstract zie: Gelder BM van

Bracke FA
Left ventricular endocardial pacing improves the clinical efficacy in a non-responder to cardiac resynchronization therapy: role of acute haemodynamic testing
Bracke FA*, Houthuizen P*, Rahel BM, Gelder BM van*
Europace. 2010 Jul;12(7):1032-4. Epub 2010 Mar 2

Recently, emphasis has been shifted from patient selection to more optimal pacing sites in nonresponders to cardiac resynchronization therapy (CRT). We present a patient who was a non-responder during both acute haemodynamic testing at implant as well as clinically thereafter. After first demonstrating acute haemodynamic improvement using LV dP/dt(max) during a temporary left ventricular (LV) endocardial pacing setup, a permanent LV endocardial lead was transseptally implanted with substantial and persistent clinical improvement.

Bracke FA
The femoral route revisited: an alternative for pectoral pacing lead implantation
Bracke FA*, Ozdemir I*, Gelder B van*
Neth Heart J. 2010;18(1):42-4

We describe the implantation via the femoral vein of a dual-chamber pacing system with lumenless, catheter-delivered pacing leads in a patient in whom subclavian access on both sides was obstructed.

Brueren BR
Acute and subacute stent thrombosis after primary PCI for ST-segment elevation myocardial infarction: incidence, predictors and clinical outcome
Heestermans AA, Van Werkum JW, Zwart B, Van Der Heyden JA, Kelder JC, Breet NJ, Van't Hof AW, Dambrink JH, Koolen JJ*, Brueren BR*, Zijlstra F, Ten Berg JM
J Thromb Haemost. 2010 Nov;8(11):2385-93. Epub 2010 Sep 10
Voor abstract zie: Koolen JJ

Crijns HJ
Do non-antiarrhythmic drugs have enough pleiotropic power to reduce atrial fibrillation?
Folkeringa RJ*, Crijns HJ*
Europace. 2010;12(3):299-300

Dekker LR

Genetic variation in SCN10A influences cardiac conduction

Chambers JC, Zhao J, Terracciano CM, Bezzina CR, Zhang W, Kaba R, Navaratnarajah M, Lotlikar A, Sehmi JS, Kooner MK, Deng G, Siedlecka U, Parasramka S, El-Hamamsy I, Wass MN, Dekker LR*, de Jong JS, Sternberg MJ, McKenna W, Severs NJ, de Silva R, Wilde AA, Anand P, Yacoub M, Scott J, Elliott P, Wood JN, Kooner JS

Nat Genet. 2010 Feb;42(2):149-52. Epub 2010 Jan 10

To identify genetic factors influencing cardiac conduction, we carried out a genome-wide association study of electrocardiographic time intervals in 6,543 Indian Asians. We identified association of a nonsynonymous SNP, rs6795970, in SCN10A (P = 2.8 x 10(-15)) with PR interval, a marker of cardiac atrioventricular conduction. Replication testing among 6,243 Indian Asians and 5,370 Europeans confirmed that rs6795970 (G>A) is associated with prolonged cardiac conduction (longer P-wave duration, PR interval and QRS duration, P = 10(-5) to 10(-20)). SCN10A encodes Na(V)1.8, a sodium channel. We show that SCN10A is expressed in mouse and human heart tissue and that PR interval is shorter in Scn10a(-/-) mice than in wild-type mice. We also find that rs6795970 is associated with a higher risk of heart block (P < 0.05) and a lower risk of ventricular fibrillation (P = 0.01). Our findings provide new insight into the pathogenesis of cardiac conduction, heart block and ventricular fibrillation.

Dekker LR

Genome-wide association study identifies a susceptibility locus at 21q21 for ventricular fibrillation in acute myocardial infarction

Bezzina CR, Pazoki R, Bardai A, Marsman RF, Jong JS de, Blom MT, Scicluna BP, Jukema JW, Bindraban NR, Lichtner P, Pfeufer A, Bishopric NH, Roden DM, Meitinger T, Chugh SS, Myerburg RJ, Jouven X, Kääb S, Dekker LR*, Tan HL, Tanck MW, Wilde AA

Nat Genet. 2010 Aug;42(8):688-91. Epub 2010 Jul 11

Sudden cardiac death from ventricular fibrillation during acute myocardial infarction is a leading cause of total and cardiovascular mortality. To our knowledge, we here report the first genome-wide association study for this trait, conducted in a set of 972 individuals with a first acute myocardial infarction, 515 of whom had ventricular fibrillation and 457 of whom did not, from the Arrhythmia Genetics in The Netherlands (AGNES) study. The most significant association to ventricular fibrillation was found at 21q21 (rs2824292, odds ratio = 1.78, 95% CI 1.47-2.13, P = 3.3 x 10(-10)). The association of rs2824292 with ventricular fibrillation was replicated in an independent case-control set consisting of 146 out-of-hospital cardiac arrest individuals with myocardial infarction complicated by ventricular fibrillation and 391 individuals who survived a myocardial infarction (controls) (odds ratio = 1.49, 95% CI 1.14-1.95, P = 0.004). The closest gene to this SNP is CXADR, which encodes a viral receptor previously implicated in myocarditis and dilated cardiomyopathy and which has recently been identified as a modulator of cardiac conduction. This locus has not previously been implicated in arrhythmia susceptibility.

Folkeringa RJ
Do non-antiarrhythmic drugs have enough pleiotropic power to reduce atrial fibrillation?
Folkeringa RJ*, Crijns HJ*
Europace. 2010;12(3): 299-300

Gelder BM van
Extraction of a coronary sinus atrioverter and a dual-coil ventricular shock lead from the same patient: a tailored approach
Gelder BM van*, Bracke FA*
Europace. 2010 Nov 24. [Epub ahead of print]

A dual-coil ICD lead and an atrioverter coiled lead implanted in the right ventricle and coronary sinus, respectively, were successfully removed with different techniques. For the ICD lead, we used a 16F laser sheath from the subclavian and for the atrioverter lead a Needle's Eye from the femoral approach.

Gelder BM van
The femoral route revisited: an alternative for pectoral pacing lead implantation
Bracke FA*, Ozdemir I*, Gelder B van*
Neth Heart J. 2010;(18):42-4
Voor abstract zie: Bracke FA

Gelder BM van
Left ventricular endocardial pacing improves the clinical efficacy in a non-responder to cardiac resynchronization therapy: role of acute haemodynamic testing
Bracke FA*, Houthuizen P*, Rahel BM, Gelder BM van*
Europace. 2010 Jul;12(7):1032-4. Epub 2010 Mar 2
Voor abstract zie: Bracke FA

Gelder BM van
Peak longitudinal strain delay is superior to TDI in the selection of patients for resynchronisation therapy
Scheffer MG, van Dessel PF, Gelder BM van*, Sutherland GR , Hemel NM van
Neth Heart J. 2010;(18):574-82

Houthuizen P
Left ventricular endocardial pacing improves the clinical efficacy in a non-responder to cardiac resynchronization therapy: role of acute haemodynamic testing
Bracke FA*, Houthuizen P*, Rahel BM,Gelder BM van*
Europace. 2010 Jul;12(7):1032-4, Epub 2010 Mar 2
Voor abstract zie: Bracke FA

Koolen JJ

Acute and subacute stent thrombosis after primary PCI for ST-segment elevation myocardial infarction: incidence, predictors and clinical outcome

Heestermans AA, Van Werkum JW, Zwart B, Van Der Heyden JA, Kelder JC, Breet NJ, Van't Hof AW, Dambrink JH, Koolen JJ*, Brueren BR*, Zijlstra F, Ten Berg JM

J Thromb Haemost. 2010 Sep 10. [Epub ahead of print]

Background:_Early coronary stent thrombosis (ST) occurs most frequent after primary percutaneous coronary intervention (PCI) for ST-segment elevation myocardial infarction (STEMI). Objectives:_To identify the specific predictors of respectively acute and subacute ST in patients after primary PCI for STEMI. Patients/methods: Consecutive STEMI patients with angiographic confirmed early ST were enrolled and compared in a 2:1 ratio with a matched control group. Clinical outcome was collected up to one year. Results:_Of 5842 STEMI patients treated with primary PCI, 201 (3.5%) presented with a definite early ST. Of these, a total of 97 (1.7%) were acute ST and 104 (1.8%) were subacute ST. Post procedural uncovered dissection, undersizing and smaller stent diameter were the strongest predictors for acute ST. No glycoprotein IIb/IIIa therapy and the use of drug eluting stents were also associated with acute ST. Lack of clopidogrel therapy in the first 30 days after the index PCI was the strongest predictor for subacute ST. Mortality rates at 1-year follow up were lower for acute ST as compared to subacute ST (8.3% vs. 13.2%, P=0.294). The incidence of definite recurrent ST at 1-year follow up was significantly lower after a first definite acute ST as compared to a first definite subacute ST (6.4% vs. 19.3%, P=0.007 at 1-year). Conclusions:_The specific risk factors for respectively acute and subacute stent thrombosis after primary PCI vary greatly. Mortality rates are high in both categories of stent thrombosis. However, recurrent ST occurs more frequently after subacute ST.

Koolen JJ

'Ins' and 'outs' of triple therapy: Optimal antiplatelet therapy in patients on chronic oral anticoagulation who need coronary stenting

Dewilde W, Verheugt FW, Breet N, Koolen JJ*, Ten Berg JM

Neth Heart J. 2010 Sep;18(9):444-50

Chronic oral anticoagulant treatment is obligatory in patients (class I) with mechanical heart valves and in patients with atrial fibrillation with CHADS2 score >1. When these patients undergo percutaneous coronary intervention with placement of a stent, there is also an indication for treatment with aspirin and clopidogrel. Unfortunately, triple therapy is known to increase the bleeding risk. For this group of patients, the bottom line is to find the ideal therapy in patients with indications for both chronic anticoagulation therapy and percutaneous intervention to prevent thromboembolic complications such as stent thrombosis without increasing the risk of bleeding.

Koolen JJ

Rationale and design of EXPLORE: a randomized, prospective, multicenter trial investigating the impact of recanalization of a chronic total occlusion on left ventricular function in patients after primary percutaneous coronary intervention for acute ST-elevation myocardial infarction

van der Schaaf RJ, Claessen BE, Hoebers LP, Verouden NJ, Koolen JJ*, Suttorp MJ, Barbato E, Bax M, Strauss BH, Olivecrona GK, Tuseth V, Glogar D, Råmunddal T, Tijssen JG, Piek JJ, Henriques JP; EXPLORE investigators

Trials. 2010 Sep 21;11:89

BACKGROUND: In the setting of primary percutaneous coronary intervention, patients with a chronic total occlusion in a non-infarct related artery were recently identified as a high-risk subgroup. It is unclear whether ST-elevation myocardial infarction patients with a chronic total occlusion in a non-infarct related artery should undergo additional percutaneous coronary intervention of the chronic total occlusion on top of optimal medical therapy shortly after primary percutaneous coronary intervention. Possible beneficial effects include reduction in adverse left ventricular remodeling and preservation of global left ventricular function and improved clinical outcome during future coronary events. METHODS/DESIGN: The Evaluating Xience V and left ventricular function in Percutaneous coronary intervention on occLusiOns afteR ST-Elevation myocardial infarction (EXPLORE) trial is a randomized, prospective, multicenter, two-arm trial with blinded evaluation of endpoints. Three hundred patients after primary percutaneous coronary intervention for ST-elevation myocardial infarction with a chronic total occlusion in a non-infarct related artery are randomized to either elective percutaneous coronary intervention of the chronic total occlusion within seven days or standard medical treatment. When assigned to the invasive arm, an everolimus-eluting coronary stent is used. Primary endpoints are left ventricular ejection fraction and left ventricular end-diastolic volume assessed by cardiac Magnetic Resonance Imaging at four months. Clinical follow-up will continue until five years. DISCUSSION: The ongoing EXPLORE trial is the first randomized clinical trial powered to investigate whether recanalization of a chronic total occlusion in a non-infarct related artery after primary percutaneous coronary intervention for ST-elevation myocardial infarction results in a better preserved residual left ventricular ejection fraction, reduced end-diastolic volume and enhanced clinical outcome.

Moonen LA

Procedural and long-term outcome of primary percutaneous coronary intervention in octogenarians

Moonen LA*, Veer M van 't*, Pijls NH*

Neth Heart J. 2010 Mar;18(3):129-34

Background/objectives. To investigate the procedural and long-term outcome of primary percutaneous coronary intervention (PCI) in octogenarians with an acute myocardial infarction.Methods. We performed a retrospective analysis of all consecutive octogenarian patients (n=98) with an acute myocardial infarction treated with primary PCI in the Catharina Hospital in the year 2006. We compared procedural results and outcome with a matched control group composed of non-octogenarians undergoing primary PCI. Follow-up period was one year.Results. The

initial success rate of PCI was similar in the two groups but short-term mortality was higher among the elderly patients: 30-day mortality 26.3 vs. 9.6%. Age-adjusted mortality between 30 days and one year was comparable in the two groups and similar to natural survival in the Netherlands. Octogenarians were less likely to have a normal left ventricular function during follow-up (48.3 vs. 66.7%). New York Heart Association (NYHA) class and recurrence rate of myocardial infarction was higher among octogenarians.Conclusion. Technical success rate during primary PCI was as good for octogenarians as in younger patients, but 30-day mortality, though acceptable, was higher among the elderly. After 30 days, age-adjusted mortality was comparable in both groups.

Pijls NH
Bifurcation lesions: Functional assessment by fractional flow reserve vs. anatomical assessment using conventional and dedicated bifurcation quantitative coronary angiogram
Sarno G, Garg S, Onuma Y, Girasis C, Tonino P*, Morel MA, Es GA v, Pijls N*, Serruys PW
Catheter Cardiovasc Interv. 2010 Nov 15;76(6):817-23
Voor abstract zie: Tonino PA

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Reply
Pijls NH, Tonino PA.
J Am Coll Cardiol. 2010 Dec 28;57(1):116

Pijls NH,
Fractional flow reserve and myocardial perfusion imaging in patients with angiographic multivessel coronary artery disease
Melikian N, De Bondt P, Tonino P*, De Winter O, Wyffels E, Bartunek J, Heyndrickx GR, Fearon WF, Pijls NH*, Wijns W, De Bruyne B
JACC Cardiovasc Interv. 2010 Mar;3(3):307-14
Voor abstract zie: Tonino P

Pijls NH
Angiographic Versus Functional Severity of Coronary Artery Stenoses in the FAME Study Fractional Flow Reserve Versus Angiography in Multivessel Evaluation
Tonino PA*, Fearon WF, Bruyne B de, Oldroyd KG, Leesar MA, Ver Lee PN, Maccarthy PA, Veer M van 't*, Pijls NH*
J Am Coll Cardiol. 2010 Jun 22;55(25):2816-2821
Voor abstract zie: Tonino P

Pijls NH

Fractional flow reserve for the assessment of nonculprit coronary artery stenoses in patients with acute myocardial infarction

Ntalianis A, Sels JW*, Davidavicius G, Tanaka N, Muller O, Trana C, Barbato E, Hamilos M, Mangiacapra F, Heyndrickx GR, Wijns W, Pijls NH*, De Bruyne B

JACC Cardiovasc Interv. 2010 Dec;3(12):1274-81

Voor abstract zie: Sels JW

Pijls NH

Fractional flow reserve versus angiography for guiding percutaneous coronary intervention in patients with multivessel coronary artery disease: 2-year follow-up of the FAME (Fractional Flow Reserve Versus Angiography for Multivessel Evaluation) study

Pijls NH*, Fearon WF, Tonino PA*, Siebert U, Ikeno F, Bornschein B, van't Veer M*, Klauss V, Manoharan G, Engstrøm T, Oldroyd KG, Ver Lee PN, MacCarthy PA, De Bruyne B; FAME Study Investigators

J Am Coll Cardiol. 2010 Jul 13;56(3):177-84. Epub 2010 May 28

OBJECTIVES: The purpose of this study was to investigate the 2-year outcome of percutaneous coronary intervention (PCI) guided by fractional flow reserve (FFR) in patients with multivessel coronary artery disease (CAD). BACKGROUND: In patients with multivessel CAD undergoing PCI, coronary angiography is the standard method for guiding stent placement. The FAME (Fractional Flow Reserve Versus Angiography for Multivessel Evaluation) study showed that routine FFR in addition to angiography improves outcomes of PCI at 1 year. It is unknown if these favorable results are maintained at 2 years of follow-up. METHODS: At 20 U.S. and European medical centers, 1,005 patients with multivessel CAD were randomly assigned to PCI with drug-eluting stents guided by angiography alone or guided by FFR measurements. Before randomization, lesions requiring PCI were identified based on their angiographic appearance. Patients randomized to angiography-guided PCI underwent stenting of all indicated lesions, whereas those randomized to FFR-guided PCI underwent stenting of indicated lesions only if the FFR was <or=0.80. RESULTS: The number of indicated lesions was 2.7+/-0.9 in the angiography-guided group and 2.8+/ -1.0 in the FFR-guided group (p=0.34). The number of stents used was 2.7+/-1.2 and 1.9+/-1.3, respectively (p<0.001). The 2-year rates of mortality or myocardial infarction were 12.9% in the angiography-guided group and 8.4% in the FFR-guided group (p=0.02). Rates of PCI or coronary artery bypass surgery were 12.7% and 10.6%, respectively (p=0.30). Combined rates of death, nonfatal myocardial infarction, and revascularization were 22.4% and 17.9%, respectively (p=0.08). For lesions deferred on the basis of FFR>0.80, the rate of myocardial infarction was 0.2% and the rate of revascularization was 3.2 % after 2 years. CONCLUSIONS: Routine measurement of FFR in patients with multivessel CAD undergoing PCI with drug-eluting stents significantly reduces mortality and myocardial infarction at 2 years when compared with standard angiography-guided PCI. (Fractional Flow Reserve Versus Angiography for Multivessel Evaluation [FAME]; NCT00267774).

Pijls NH

Procedural and long-term outcome of primary percutaneous coronary intervention in octogenarians

Moonen LA*, Veer M van 't*, Pijls NH*

Neth Heart J. 2010 Mar;18(3):129-34

Voor abstract zie: Moonen LA

Pijls NH

Quantitative assessment of coronary microvascular function in patients with and without epicardial atherosclerosis

Melikian N, Vercauteren S, Fearon WF, Cuisset T, MacCarthy PA, Davidavicius G, Aarnoudse W, Bartunek J, Vanderheyden M, Wyffels E, Wijns W, Heyndrickx GR, Pijls NH*, Bruyne B de

EuroIntervention. 2010 Apr;5(8):939-45

AIMS: The influence of atherosclerosis and its risk factors on coronary microvascular function remain unclear as current methods of assessing microvascular function do not specifically test the microcirculation in isolation. We examined the influence of epicardial vessel atherosclerosis on coronary microvascular function using the index of myocardial resistance (IMR). METHODS AND RESULTS: IMR (a measure of microvascular function) and fractional flow reserve (FFR, a measure of the epicardial compartment) were measured in 143 coronary arteries (116 patients). Fifteen patients (22 arteries, mean age 48+/-16 years) had no clinical evidence of atherosclerosis (control group). One hundred and one patients (121 arteries, mean age 63+/-11 years) had established atherosclerosis and multiple cardiovascular risk factors (atheroma group). Mean IMR in the control group (19+/-5, range 8-28) was significantly lower than in the atheroma group (25+/-13, range 6-75) (P<0.01). However, there was large overlap between IMR in both groups, with 69% of IMR values in patients with atheroma being within the control range. Mean FFR was also higher in the control group (0.96+/-0.02, range 0.93-1.00) than in the atheroma group (0.85+/-0.14, range 0.19-1.00) (P<0.01). There was no correlation between IMR and FFR (r=0.09; P=0.24), even when results in the control (r=0.02; P=0.92) and atheroma (r=0.15; P=0.10) groups were analysed in isolation. Using stepwise multiple regression analysis presence/absence of atheroma (ss=0.42; P=0.02) was the only independent determinant of IMR. CONCLUSIONS: Mean IMR is higher in patients with epicardial atherosclerosis. However, there is a large overlap between IMR in patients with and without epicardial atherosclerosis.

Pijls NH

Economic Evaluation of Fractional Flow Reserve-Guided Percutaneous Coronary Intervention in Patients With Multivessel Disease

Fearon WF, Bornschein B, Tonino PA*, Gothe RM, Bruyne BD, Pijls NH*, Siebert U; for the Fractional Flow Reserve Versus Angiography for Multivessel Evaluation (FAME) Study Investigators

Circulation. 2010 Dec 14;122(24):2545-2550. Epub 2010 Nov 29

Voor abstract zie: Tonino PA

Sels JW

Fractional flow reserve for the assessment of nonculprit coronary artery stenoses in patients with acute myocardial infarction

Ntalianis A, Sels JW*, Davidavicius G, Tanaka N, Muller O, Trana C, Barbato E, Hamilos M, Mangiacapra F, Heyndrickx GR, Wijns W, Pijls NH*, De Bruyne B

JACC Cardiovasc Interv. 2010 Dec;3(12):1274-81

OBJECTIVES: We investigated the reliability of fractional flow reserve (FFR) of nonculprit coronary stenoses during percutaneous coronary intervention (PCI) in acute myocardial infarction. BACKGROUND: Assessing the hemodynamic severity of the nonculprit coronary artery stenoses at the acute phase of a myocardial infarction could improve risk stratification and shorten the diagnostic workup. METHODS: One hundred one patients undergoing PCI for an acute myocardial infarction (n = 75 with ST-segment elevation myocardial infarction [STEMI], and n = 26 with non-ST-segment elevation myocardial infarction) were prospectively recruited. The FFR measurements in 112 nonculprit stenoses were obtained immediately after PCI of the culprit stenosis and were repeated 35 ± 4 days later. In addition, left ventricular ejection fraction, quantitative coronary angiographic measurements of the nonculprit stenoses, Thrombolysis In Myocardial Infarction (TIMI) flow, corrected TIMI frame count (cTFC), and the index of microcirculatory resistance (n = 14) of the nonculprit vessels were assessed in the acute phase and at control angiogram. RESULTS: The FFR value of the nonculprit stenoses did not change between the acute and follow-up (0.77 ± 0.13 vs. 0.77 ± 0.13, respectively, p = NS). In only 2 patients, the FFR value was higher than 0.8 at the acute phase and lower than 0.75 at follow-up. The TIMI flow, cTFC, percentage diameter stenosis, minimum lumen diameter, and index of microcirculatory resistance did not change. Left ventricular ejection fraction increased significantly in patients with STEMI (from 54 ± 13% to 57 ± 13%, p = 0.03). CONCLUSIONS: During the acute phase of acute coronary syndromes, the severity of nonculprit coronary artery stenoses can reliably be assessed by FFR. This allows a decision about the need for additional revascularization and might contribute to a better risk stratification.

Tonino PA

Angiographic Versus Functional Severity of Coronary Artery Stenoses in the FAME Study Fractional Flow Reserve Versus Angiography in Multivessel Evaluation

Tonino PA*, Fearon WF, Bruyne B de, Oldroyd KG, Leesar MA, Ver Lee PN, Maccarthy PA, Veer M van 't*, Pijls NH*

J Am Coll Cardiol. 2010 Jun 22;55(25):2816-821

OBJECTIVES: The purpose of this study was to investigate the relationship between angiographic and functional severity of coronary artery stenoses in the FAME (Fractional Flow Reserve Versus Angiography in Multivessel Evaluation) study. BACKGROUND: It can be difficult to determine on the coronary angiogram which lesions cause ischemia. Revascularization of coronary stenoses that induce ischemia improves a patient's functional status and outcome. For stenoses that do not induce ischemia, however, the benefit of revascularization is less clear. METHODS: In the FAME study, routine measurement of the fractional flow reserve (FFR) was compared with angiography for guiding percutaneous coronary intervention in patients with

multivessel coronary artery disease. The use of the FFR in addition to angiography significantly reduced the rate of all major adverse cardiac events at 1 year. Of the 1,414 lesions (509 patients) in the FFR-guided arm of the FAME study, 1,329 were successfully assessed by the FFR and are included in this analysis. RESULTS: Before FFR measurement, these lesions were categorized into 50% to 70% (47% of all lesions), 71% to 90% (39% of all lesions), and 91% to 99% (15% of all lesions) diameter stenosis by visual assessment. In the category 50% to 70% stenosis, 35% were functionally significant (FFR </=0.80) and 65% were not (FFR >0.80). In the category 71% to 90% stenosis, 80% were functionally significant and 20% were not. In the category of subtotal stenoses, 96% were functionally significant. Of all 509 patients with angiographically defined multivessel disease, only 235 (46%) had functional multivessel disease (>/=2 coronary arteries with an FFR </=0.80). CONCLUSIONS: Angiography is inaccurate in assessing the functional significance of a coronary stenosis when compared with the FFR, not only in the 50% to 70% category but also in the 70% to 90% angiographic severity category.

Tonino PA

Bifurcation lesions: Functional assessment by fractional flow reserve vs. anatomical assessment using conventional and dedicated bifurcation quantitative coronary angiogram

Sarno G, Garg S, Onuma Y, Girasis C, Tonino P*, Morel MA, van Es GA, Pijls N*, Serruys PW

Catheter Cardiovasc Interv. 2010 Nov 15;76(6):817-23

BACKGROUND: The purpose of this study was to compare the performance of both conventional quantitative coronary angiography (QCA) and the dedicated three branch QCA model for bifurcations in the prediction of a functionally significant lesion according to fractional flow reserve (FFR) in patients with bifurcation lesions. METHODS: Twenty patients with bifurcation lesions underwent coronary angiography together with a functional evaluation of both the main branch and side-branch using FFR. QCA was performed off-line with both conventional QCA software (CAASII, Pie Medical Imaging, Maastricht, The Netherlands) and three branch QCA software (CAAS5, Pie Medical Imaging, Maastricht, The Netherlands). A stenosis was considered hemodynamically significant when the FFR value was ≤ 0.80 and anatomically significant when the diameter stenosis was >50%. The QCA and FFR data were correlated by means of the Pearson correlation. RESULTS: Eighteen bifurcation lesions were suitable for the QCA analysis. In the main vessel, a significant inverse correlation with FFR was seen with both conventional QCA (Pearson r = 0.52 for the MV, P = 0.02), and the three branch QCA model (Pearson r = 0.67 for the MV, P = 0.002). Conversely, in the side-branch, the correlation between QCA and FFR was only significant with the three branch QCA model (Pearson r = 0.57, P = 0.02 for the SB). CONCLUSIONS: In bifurcation lesions the correlation between the anatomic severity of a coronary stenosis and its functional significance appears to be somewhat higher when QCA is performed using the three branch model. This is most notable for side-branch stenoses which can be overestimated when using conventional QCA.

Tonino PA

Economic Evaluation of Fractional Flow Reserve-Guided Percutaneous Coronary Intervention in Patients With Multivessel Disease

Fearon WF, Bornschein B, Tonino PA*, Gothe RM, Bruyne BD, Pijls NH*, Siebert U; for the Fractional Flow Reserve Versus Angiography for Multivessel Evaluation (FAME) Study Investigators

Circulation. 2010 Dec 14;122(24):2545-550, Epub 2010 Nov 29

Background- The Fractional Flow Reserve Versus Angiography for Multivessel Evaluation (FAME) study demonstrated significantly improved health outcomes at 1 year in patients randomized to multivessel percutaneous coronary intervention guided by fractional flow reserve (FFR) compared with percutaneous coronary intervention guided by angiography alone. The economic impact of routine measurement of FFR in this setting is not known. Methods and Results- In this study, 1005 patients were randomly assigned to FFR-guided or angiography-guided percutaneous coronary intervention and followed up for 1 year. A prospective cost-utility analysis comparing costs and quality-adjusted life-years was performed with a time horizon of 1 year. Quality-adjusted life-years were calculated with the use of utilities determined by the EuroQuol 5 dimension health survey with US weights. Direct medical costs included those of the index procedure and hospitalization and costs for major adverse cardiac events during follow-up. Confidence intervals for both quality-adjusted life-years and costs were estimated by the bootstrap percentile method. Major adverse cardiac events at 1 year occurred in 13.2% of those in the FFR-guided arm and 18.3% of those in the angiography-guided arm (P=0.02). Quality-adjusted life-years were slightly greater in the FFR-guided arm (0.853 versus 0.838; P=0.2). Mean overall costs at 1 year were significantly less in the FFR-guided arm ($14 315 versus $16 700; P<0.001). Bootstrap simulation indicated that the FFR-guided strategy was cost-saving in 90.74% and cost-effective at a threshold of US $50 000 per quality-adjusted life-years in 99.96%. Sensitivity analyses demonstrated robust results. Conclusion- Economic evaluation of the FAME study reveals that FFR-guided percutaneous coronary intervention in patients with multivessel coronary disease is one of those rare situations in which a new technology not only improves outcomes but also saves resources.

Tonino PA

Fractional flow reserve and myocardial perfusion imaging in patients with angiographic multivessel coronary artery disease

Melikian N, De Bondt P, Tonino P*, De Winter O, Wyffels E, Bartunek J, Heyndrickx GR, Fearon WF, Pijls NH*, Wijns W, De Bruyne B

JACC Cardiovasc Interv. 2010 Mar;3(3):307-14

OBJECTIVES: The aim of this study was to investigate the correlation between myocardial ischemia detected by myocardial perfusion imaging (MPI) with single-photon emission computed tomography with intracoronary pressure-derived fractional flow reserve (FFR) in patients with multivessel coronary disease at angiography. BACKGROUND: Myocardial perfusion imaging can underestimate the number of ischemic territories in patients with multivessel disease. However, there are limited data comparing MPI and FFR, a highly accurate functional index of myocardial ischemia, in multivessel coronary disease. METHODS: Sixty-seven

patients (201 vascular territories) with angiographic 2- or 3-vessel coronary disease were prospectively scheduled to undergo within 2 weeks MPI (rest/stress adenosine) and FFR in each vessel. RESULTS: In 42% of patients, MPI and FFR detected identical ischemic territories (mean number of territories 0.9 +/- 0.8 for both; p = 1.00). In the remaining 36% MPI underestimated (mean number of territories; MPI: 0.46 +/- 0.6, FFR: 2.0 +/- 0.6; p < 0.001) and in 22% overestimated (mean number of territories; MPI: 1.9 +/- 0.8, FFR: 0.5 +/- 0.8; p < 0.001) the number of ischemic territories in comparison with FFR. There was poor concordance between the ability of the 2 methods to detect myocardial ischemia on both a per-patient (kappa = 0.14 [95% confidence interval: -0.10 to 0.39]) and per-vessel (kappa = 0.28 [95% confidence interval: 0.15 to 0.42]) basis. CONCLUSIONS: Myocardial perfusion imaging with single-photon emission computed tomography has poor concordance with FFR and tends to underestimate or overestimate the functional importance of coronary stenosis seen at angiography in comparison with FFR in patients with multivessel disease. These findings might have important consequences in using MPI to determine the optimal revascularization strategy in patients with multivessel coronary disease.

Tonino PA
Fractional Flow Reserve Versus Angiography for Guiding Percutaneous Coronary Intervention in Patients With Multivessel Coronary Artery Disease 2-Year Follow-Up of the FAME (Fractional Flow Reserve Versus Angiography for Multivessel Evaluation) Study
Pijls NH*, Fearon WF, Tonino PA*, Siebert U, Ikeno F, Bornschein B, Veer M van 't*, Klauss V, Manoharan G, Engstrøm T, Oldroyd KG, Ver Lee PN, Maccarthy PA, Bruyne B de; FAME Study Investigators
J Am Coll Cardiol. 2010 Jul 13;56(3):177-84. Epub 2010 May 28
Voor abstract zie: Pijls NH

Tonino PA
Reply
Pijls NH, Tonino PA
J Am Coll Cardiol. 2010 Dec 28;57(1):116

Veer M van 't
Angiographic Versus Functional Severity of Coronary Artery Stenoses in the FAME Study Fractional Flow Reserve Versus Angiography in Multivessel Evaluation
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Veer M van 't

Fractional Flow Reserve Versus Angiography for Guiding Percutaneous Coronary Intervention in Patients With Multivessel Coronary Artery Disease 2-Year Follow-Up of the FAME (Fractional Flow Reserve Versus Angiography for Multivessel Evaluation) Study

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J Am Coll Cardiol. 2010 Jul 13;56(3):177-84. Epub 2010 May 28

Voor abstract zie: Tonino PA

Veer M van 't

Procedural and long-term outcome of primary percutaneous coronary intervention in octogenarians

Moonen LA*, Veer M van 't*, Pijls NH*

Neth Heart J. 2010 Mar;18(3):129-34

Voor abstract zie: Moonen LA

** = werkzaam in het Catharina-ziekenhuis*

Cardiothoracale chirurgie

Artikelen

Bekker MW

Risk Factors for Red Blood Cell Transfusion After Coronary Artery Bypass Graft Surgery

Straten AH van*, Kats S*, Bekker MW*, Verstappen F*, Woorst JF ter*, Zundert A van*, Soliman Hamad MA*

J Cardiothorac Vasc Anesth. 2010;24:413-7, [Epub ahead of print]

Voor abstract zie: Straten AH van

Berreklouw E

Sutureless replacement of aortic valves with St Jude Medical mechanical valve prostheses and Nitinol attachment rings: Feasibility in long-term (90-day) pig experiments

Berreklouw E*, Koene B*, De Somer F, Bouchez S, Chiers K, Taeymans Y, Nooten GJ v

J Thorac Cardiovasc Surg. 2010 Aug 19 [Epub ahead of print]

OBJECTIVE: Nitinol attachment rings (devices) used to attach mechanical aortic valve prostheses suturelessly were studied in long-term (90 days) pig experiments. METHODS: The aortic valve was removed and replaced by a device around a St Jude Medical mechanical valve prosthesis in 10 surviving pigs. Supravalvular angiography was done at the end of the operation. No coumarin derivates were given. RESULTS: No or minimal aortic regurgitation was confirmed in all surviving pigs at the end of the operation. Total follow-up was 846 days. In 4 pigs, follow-up was shorter than 90 days (28-75 days); the other 6 pigs did reach 90 days' survival or more. Repeat angiography in 4 pigs at the end of follow-up confirmed the unchanged position of the device at the aortic annulus, without aortic regurgitation. At autopsy, in all pigs the devices proved to be well grown in at the annulus, covered with endothelium, and sometimes tissue overgrowth related to not using coumarin derivates. There was no case of para-device leakage, migration, or embolization. No damage to surrounding anatomic structures or prosthetic valves was found. CONCLUSIONS: Nitinol attachment rings can be used to replace the aortic valve suturelessly with St Jude Medical mechanical aortic valve prostheses, without para-device leakage, migration, or damage to the surrounding tissues, in long-term pig experiments during a follow-up of 90 days or more. Refraining from anticoagulation in pigs with mechanical valve prostheses can lead to tissue overgrowth of the valve prosthesis. Further studies are needed to determine long-term feasibility of this method in human beings.

Berreklouw E

The Impact of New-Onset Postoperative Atrial Fibrillation on Mortality After Coronary Artery Bypass Grafting

Bramer S*, Straten AH van*, Soliman Hamad MA*, Berreklouw E*, Martens EJ*, Maessen JG

Ann Thorac Surg. 2010 Aug;90(2):443-49

Voor abstract zie: Bramer S

Berreklouw E

The impact of preoperative atrial fibrillation on early and late mortality after coronary artery bypass grafting

Bramer S*, Straten AH van*, Soliman Hamad MA*, Berreklouw E*, Martens EJ*, Maessen JG

Eur J Cardiothorac Surg. 2010 Sep;38(3):373-9. Epub 2010 Apr 3

Voor abstract zie: Bramer S

Berreklouw E

Thrombocytopenia after aortic valve replacement: comparison between mechanical and biological valves

Straten AH van*, Hamad MA*, Berreklouw E*, Woorst JF ter*, Martens EJ*, Tan ME

J Heart Valve Dis. 2010 May;19(3):394-9

Voor abstract zie: Straten AH van

Bramer S

Effect of body mass index on early and late mortality after coronary artery bypass grafting

Straten AH van*, Bramer S*, Soliman Hamad MA*, Zundert AA van*, Martens EJ*, Schönberger JP*, Wolf AM de

Ann Thorac Surg. 2010; 89(1):30-7

Voor abstract zie: Straten AH van

Bramer S

The Impact of New-Onset Postoperative Atrial Fibrillation on Mortality After Coronary Artery Bypass Grafting

Bramer S*, Straten AH van*, Soliman Hamad MA*, Berreklouw E*, Martens EJ*, Maessen JG

Ann Thorac Surg. 2010 Aug;90(2):443-49

BACKGROUND: New-onset postoperative atrial fibrillation (POAF) is a frequent rhythm disturbance after coronary artery bypass grafting (CABG). This study investigated the independent effect of POAF on early and late mortality after isolated CABG. METHODS: Data of patients who consecutively underwent isolated CABG between January 2003 and December 2007 were prospectively collected. The analysis included 5098 patients with preoperative sinus rhythm and no history of atrial fibrillation. Logistic regression analysis for early mortality and Cox regression analysis for late mortality were performed. Propensity score matching was performed to eliminate the effect of confounders. RESULTS: Median follow-up was 2.5 years. POAF was documented in 1122 patients (22.0%). Early mortality was more frequent in POAF patients (3.1%) vs non-POAF patients (1.6%, p = 0.002), but multivariate logistic regression analysis could not identify POAF as an independent predictor of early mortality (p = 0.169). This outcome did not change after adjusting for quintiles of the propensity score of POAF (p = 0.100). Multivariate Cox proportional hazard analyses demonstrated POAF was an independent predictor of overall and late mortality with hazard ratios of 1.35 (p = 0.012 and p = 0.039, respectively). Analyses after propensity score matching showed that patients with POAF had similar hazard ratios of 1.36 for overall mortality and 1.34 for late mortality (p = 0.009 and

p = 0.042, respectively). CONCLUSIONS: POAF is an independent predictor of overall and late mortality after isolated CABG but not of early mortality.

Bramer S

The impact of preoperative atrial fibrillation on early and late mortality after coronary artery bypass grafting

Bramer S*, Straten AH van*, Soliman Hamad MA*, Berreklouw E*, Martens EJ*, Maessen JG

Eur J Cardiothorac Surg. 2010 Sep;38(3):373-9. Epub 2010 Apr 3, [Epub ahead of print]

OBJECTIVES: There are still doubts on the effect of preoperative atrial fibrillation (AF) on early and late mortality after coronary artery bypass grafting (CABG). This retrospective study demonstrates the effects of preoperative AF on the short-term and long-term survival after CABG. METHODS: We retrospectively analysed the data of 10626 patients who underwent CABG between January 1998 and December 2007. The data of 221 patients with a history of preoperative AF (2.5%) and 8631 patients with preoperative sinus rhythm were eligible for analysis. Survival of these patient groups was compared to survival of age- and sex-matched groups of the Dutch general population. RESULTS: Mean follow-up duration was 4.6 + or - 2.9 years. Multivariate logistic regression analysis showed preoperative AF to be an independent risk factor for early mortality after CABG, with an odds ratio of 2.06 (95% confidence interval (CI): 1.08-3.95; P=0.029). Multivariate Cox proportional hazard analysis revealed that preoperative AF is an independent risk factor for late mortality after CABG, with a hazard ratio (HR) of 1.67 (95% CI: 1.21-2.31; P=0.002). Using propensity score matching, AF was also an independent risk factor for late mortality after CABG, with an HR of 2.77 (95% CI: 1.6-4.79; P<0.001). In comparison with the general Dutch population, patients with preoperative AF who undergo CABG have a worse long-term survival, while patients with preoperative sinus rhythm experience a better survival. CONCLUSIONS: Preoperative AF is an independent risk factor for early and late mortality after first-time elective CABG.

Elenbaas TW

Is the use of Steri-StripTM S for wound closure after coronary artery bypass grafting better than intracuticular suture?

Gevel DF van de*, Soliman Hamad MA*, Elenbaas TW*, Ostertag JU,* Schönberger JP*

Interact Cardiovasc Thorac Surg. 2010 Apr;10(4):561-4. Epub 2010 Jan 5

Voor abstract zie: Gevel DF van de

Elenbaas TW

Preoperative Atrial Fibrillation and Elevated C-Reactive Protein Levels as Predictors of Mediastinitis After Coronary Artery Bypass Grafting

Elenbaas TW*, Soliman Hamad MA*, Schönberger JP*, Martens EJ*, Zundert AA van*, Straten AH van*

Ann Thorac Surg. 2010; 89(3): 704-9

BACKGROUND: Mediastinitis is a serious complication after coronary artery bypass grafting (CABG). We studied the risk factors for the development of postoperative mediastinitis in a large group of patients who underwent isolated CABG at Catharina Hospital, Eindhoven, The Netherlands. METHODS: Data of all patients undergoing an

isolated CABG between January 1998 and December 2008 were analyzed. Univariate and multivariate logistic regression analyses were performed to investigate the effect of biomedical variables on the development of mediastinitis. Multivariate analyses were used to test for the confounding effect of various risk factors on outcomes. RESULTS: Mediastinitis was present in 100 out of the 11,748 patients. Preoperative atrial fibrillation [odds ratio = 4.26 (2.26 to 8.02)] and an elevated preoperative C-reactive protein level [odds ratio = 1.013 (1.007 to 1.020)] were important independent predictors of the development of mediastinitis. Other significant risk factors were the following: age, chronic obstructive pulmonary disease, diabetes, morbid obesity, use of extracorporeal circulation, use of bilateral internal mammary arteries, reexploration for ischemia, and perioperative myocardial infarction. CONCLUSIONS: Apart from previously described risk factors for the development of postoperative mediastinitis, we found preoperative atrial fibrillation and an elevated C-reactive protein level to be significant predictors of mediastinitis in patients undergoing CABG.

Firanescu C

Peripheral Vascular Disease as a Predictor of Survival After Coronary Artery Bypass Grafting: Comparison With a Matched General Population

Straten AH van*, Firanescu C*, Soliman Hamad MA*, Tan ME, Woorst JF ter*, Martens EJ*, Zundert AA van*

Ann Thorac Surg. 2010;89(2):414-20

Voor abstract zie: Straten AH van

Gevel DF van de

Is the use of Steri-StripTM S for wound closure after coronary artery bypass grafting better than intracuticular suture?

Gevel DF van de*, Soliman Hamad MA*, Elenbaas TW*, Ostertag JU*, Schönberger JP*

Interact Cardiovasc Thorac Surg. 2010 Apr;10(4):561-4. Epub 2010 Jan 5

Several methods have been used in wound closure after coronary artery bypass grafting (CABG). In this study, the safety and efficacy of one of these methods, Steri-Strip(TM) S is compared with the traditional intracuticular suture method. Eighty-one patients undergoing CABG were prospectively randomized into two groups according to the method of skin closure: Steri-Strip(TM) S group and traditional suture group. Comparison between the two methods was done with regards to the length of the wound and the time needed to close it. The median closure time with Steri-Strip(TM) S was 5.45+/-3.35 min vs. 7.53+/-3.41 min in the suture group. A pain score of G6 at the first postoperative day was found in 30% of the patients in the suture group vs. 14% of the patients in the Steri-Strip(TM) S group (P=0.07). Cosmetic evaluation showed a non-significant difference in the linear visual analogue score in favor of Steri-Strip (TM) S group compared to the intracuticular suture group (73.1 vs. 70.1) (P=0.07). Steri-Strip(TM) S is a fast, safe alternative for wound closure of the sternotomy incision and graft harvesting site. A larger study is needed to establish the potential beneficial effect of Steri-Strip(TM) S on wound infection prevention. Keywords: Surgical tape; Sutures; Surgical wound; Coronary artery bypass grafting.

Kats S

Endotoxin release in cardiac surgery with cardiopulmonary bypass: pathophysiology and possible therapeutic strategies. An update

Kats S*, Schönberger JP*, Brands R, Seinen W, van Oeveren W

Eur J Cardiothorac Surg. 2010 Jul 19. [Epub ahead of print]

Cardiac surgery with cardiopulmonary bypass provokes a systemic inflammatory response syndrome caused by the surgical trauma itself, blood contact with the non-physiological surfaces of the extracorporeal circuit, endotoxemia, and ischemia. The role of endotoxin in the inflammatory response syndrome has been well investigated. In this report, we reviewed recent advances in the understanding of the pathophysiology of the endotoxin release during cardiopulmonary bypass and the possible therapeutic strategies aimed to reduce the endotoxin release or to counteract the inflammatory effects of endotoxin. Although many different strategies to detoxify endotoxins were evaluated, none of them were able to show statistically significant differences in clinical outcome.

Kats S

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Straten AH van*, Kats S*, Bekker MW*, Verstappen F*, Woorst JF ter*, Zundert A van*, Soliman Hamad MA*

J Cardiothorac Vasc Anesth. 2010;24:413-7, [Epub ahead of print]

Voor abstract zie: Straten AH van

Koene B

Sutureless replacement of aortic valves with St Jude Medical mechanical valve prostheses and Nitinol attachment rings: Feasibility in long-term (90-day) pig experiments

Berreklouw E*, Koene B*, De Somer F, Bouchez S, Chiers K, Taeymans Y, Van Nooten GJ.

J Thorac Cardiovasc Surg. 2010 Aug 19. [Epub ahead of print]

Voor abstract zie: Berreklouw E

Ozdemir I

The femoral route revisited: an alternative for pectoral pacing lead implantation

Bracke FA*, Ozdemir I*, Gelder B van*

Neth Heart J. 2010;(18): 42-4

Voor abstract zie: Bracke FA

Penn OC

Preoperative Prediction of Early Mortality in Patients with Low Ejection Fraction Undergoing Coronary Artery Bypass Grafting

Soliman Hamad MA*, Van Straten AH*, Van Zundert AA*, Ter Woorst JF*, Martens EJ, Penn OC*

J Card Surg. 2011 Jan;26(1):9-15. Epub 2010 Nov 14

Voor abstract zie: Soliman Hamad MA

Schönberger JP

Preoperative ejection fraction as a predictor of survival after coronary artery bypass grafting: comparison with a matched general population

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Effect of body mass index on early and late mortality after coronary artery bypass grafting

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Soliman Hamad MA
Evaluation of the EuroSCORE risk scoring model for patients undergoing coronary artery bypass graft surgery: a word of caution
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Preoperative ejection fraction as a predictor of survival after coronary artery bypass grafting: comparison with a matched general population

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J Cardiothorac Surg. 2010 Apr 23;5(1):29. , [Epub ahead of print]

ABSTRACT: BACKGROUND: Preoperative left ventricular dysfunction is an established risk factor for early and late mortality after revascularization. This retrospective analysis demonstrates the effects of preoperative ejection fraction on the short-term and long-term survival of patients after coronary artery bypass grafting. METHODS: Early and late mortality were determined retrospectively in 10 626 consecutive patients who underwent isolated coronary bypass between January 1998 and December 2007. The subjects were divided into 3 groups according to their preoperative ejection fraction. Expected survival was estimated by comparison with a general Dutch population group described in the database of the Dutch Central Bureau for Statistics. For each of our groups with a known preoperative ejection fraction, a general Dutch population group was matched for age, sex, and year of operation. Results and Discussion: One hundred twenty-two patients were lost to follow-up. In 219 patients, the preoperative ejection fraction could not be retrieved. In the remaining patients (n=10 285), the results of multivariate logistic regression and Cox regression analysis identified the ejection fraction as a predictor of early and late mortality. When we compared long-term survival and expected survival, we found a relatively poorer outcome in all subjects with an ejection fraction of < 50%. In subjects with a preoperative ejection fraction of > 50%, long-term survival exceeded expected survival. CONCLUSIONS: The severity of left ventricular dysfunction was associated with poor survival. Compared with the survival of the matched general poulation, our coronary bypass patients had a worse outcome only if their preoperative ejection fraction was < 50%.

Soliman Hamad MA

Preoperative Prediction of Early Mortality in Patients with Low Ejection Fraction Undergoing Coronary Artery Bypass Grafting

Soliman Hamad MA*, Van Straten AH*, Van Zundert AA*, Ter Woorst JF*, Martens EJ, Penn OC*

J Card Surg. 2011 Jan;26(1):9-15. Epub 2010 Nov 14

Background and Aim of the Study: Patients with low ejection farction (EF) undergoing coronary artery bypass grafting (CABG) usually have a higher incidence of mortality and morbidity. In this retrospective study, we sought to detect significant preoperative predictors of early mortality in these patients. Methods: Patients with an EF of ≤30% who underwent isolated CABG in Catharina Hospital, Eindhoven, the

Netherlands, between January 1998 and December 2008 (n = 413) were included in this study. All the preoperative patient-related risk factors were entered into a logistic regression analysis model to detect the significant predictors of early mortality. Results: Patients with an EF of ≤30% represent 4.1% of the whole CABG population. The overall early mortality in this patient group was 9.1%. Risk factors for early mortality as identified by the univariate analysis were age, chronic obstructive pulmonary disease (COPD), prior CABG, New York Heart association (NYHA) class, emergency operation, preoperative serum creatinine (SeCr), and preoperative hemoglobin (Hb) level. These factors were entered into the multivariate analysis and were all identified as independent risk factors for early mortality. Conclusions: This study confirmed the impact of some well-known preoperative risk factors on early outcome in patients with low EF undergoing CABG. In addition, we have shown the predictive value of preoperative SeCr and hemoglobin level that have not yet been described

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The Impact of New-Onset Postoperative Atrial Fibrillation on Mortality After Coronary Artery Bypass Grafting
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Ann Thorac Surg. 2010 Aug;90(2):443-49
Voor abstract zie: Bramer S

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J Heart Valve Dis. 2010 May;19(3):394-9
Voor abstract zie: Straten AH van

Straten AH van

Effect of body mass index on early and late mortality after coronary artery bypass grafting

Straten AH van*, Bramer S*, Soliman Hamad MA*, Zundert AA van*, Martens EJ*, Schönberger JP*, Wolf AM de

Ann Thorac Surg. 2010;89(1):30-7

BACKGROUND: The effect of obesity on the long-term outcome after coronary artery bypass graft surgery (CABG) remains controversial. We analyzed data of patients undergoing CABG in a single center, to determine the predictive value of body mass index in combination with comorbidities on early and late mortality. METHODS: Early and late mortality of consecutive patients undergoing isolated CABG from January 1998 until December 2007 were determined. Patients were classified into five groups according to preoperative body mass index: underweight, normal weight, overweight, obese, and morbidly obese. RESULTS: After excluding 122 patients who were lost to follow-up and 236 patients with missing preoperative body mass index, 10,268 patients were studied. Multivariate logistic regression analyses showed that underweight was associated with higher early mortality (hazard ratio 2.63; 95% confidence interval: 1.13 to 6.11, p = 0.025). Multivariate Cox regression analyses did reveal morbid obesity as an independent predictor of late mortality (hazard ratio 1.67, 95% confidence interval: 1.15 to 2.43, p = 0.007). CONCLUSIONS: Among patients undergoing isolated CABG, underweight is an independent predictor for early mortality, and morbid obesity is an independent predictor for late mortality. 2010 The Society of Thoracic Surgeons.

Straten AH van

Effect of duration of red blood cell storage on early and late mortality after coronary artery bypass grafting

Straten AH van*, Soliman Hamad MA*, Zundert AA*, Martens EJ*, Woorst JF*, Wolf AM, Scharnhorst V*

J Thorac Cardiovasc Surg. 2011 Jan;141(1):231-7. Epub 2010 Jul 9.

OBJECTIVES: Recently, concern has been expressed about the transfusion of older red blood cells after cardiac surgery. We tested the hypothesis that longer storage of transfused red blood cells increases the risk of early and late mortality in patients who undergo coronary artery bypass grafting. METHODS: We retrospectively analyzed data of patients who underwent isolated coronary artery bypass grafting between January 1998 and December 2007 in Catharina Hospital, Eindhoven, The Netherlands, and received up to 10 U of red blood cells intraoperatively or during the first 5 postoperative days. The patients were divided into 3 groups according to the storage time of the red blood cells, with a cutoff point of 14 days, as follows: "only younger blood" (n = 1422), "only older blood" (n = 1719), and at least 1 U of older RBCs ("any older blood"; n = 2175). RESULTS: The mean follow-up time was 1693 +/- 1058 days (range, 0-3708 days). The median follow-up time was 1629 days. Univariate and multivariate logistic regression analyses revealed that the number of transfused units but not the storage time of blood entered either as a continuous variable or as a dichotomous variable with a cutoff point of 14 days was a risk factor for early mortality. Neither the number of transfused units nor the storage time was an independent risk factor for late mortality. Log-rank testing revealed no statistical

difference in survival among the groups. CONCLUSIONS: The storage time of transfused red blood cells is not a risk factor for early or late mortality in patients who undergo coronary artery bypass grafting.

Straten AH van

Effect of storage time of transfused plasma on early and late mortality after coronary artery bypass grafting

van Straten AH*, Soliman Hamad MA*, Martens EJ*, Tan ME*, de Wolf AM, Scharnhorst V*, van Zundert AA*

J Thorac Cardiovasc Surg. 2011 Jan;141(1):238-43.e1-2. Epub 2010 Sep 19

OBJECTIVES: Because some concern has been raised about the storage time of red blood cells and outcomes after cardiac surgery, we investigated whether longer storage time of transfused plasma increases the risk for early or late mortality among patients who have undergone coronary artery bypass grafting. METHODS: We retrospectively analyzed the data of all 10,626 patients who underwent isolated coronary artery bypass grafting in Catharina Hospital, Eindhoven, The Netherlands, between January 1998 and December 2007. All patients who received at least 1 unit of plasma intraoperatively or during the first 5 postoperative days were studied. They were divided into 3 groups (only younger plasma, only older plasma, and any older plasma groups) according to the storage time of the plasma (cutoff point, 323 days). RESULTS: After we had excluded 122 patients who were unavailable for follow-up, we found that 375 of the remaining patients (n = 745) received only younger plasma 370 patients received any older plasma, and 200 patients received only older plasma (mean follow-up, 1565 ± 1137 days; median follow-up, 1629 days). The storage time of plasma, when entered as either a continuous variable or a dichotomous variable, was a risk factor for early but not late mortality. Log-rank testing revealed no statistical difference in long-term survival among the groups. CONCLUSIONS: Longer storage time of plasma is a risk factor for early but not late mortality among patients who have undergone coronary artery bypass grafting.

Straten AH van

Evaluation of the EuroSCORE risk scoring model for patients undergoing coronary artery bypass graft surgery: a word of caution

Straten AH van *, Tan EM*, Hamad MA*, Martens EJ*, Zundert AA van*

Neth Heart J. 2010 Aug;18(7-8):355-9

Background. Risk-adjusted mortality rates are used to compare quality of care of different hospitals. We evaluated the EuroSCORE (European System for Cardiac Operative Risk Evaluation) in patients undergoing isolated coronary artery bypass grafting (CABG).Patients and method. Data of all CABG patients from January 2004 until December 2008 were analysed. Receiver-operating characteristics (ROC) curves for the additive and logistic EuroSCOREs and the areas under the ROC curve were calculated. Predicted probability of hospital mortality was calculated using logistic regression analyses and compared with the EuroSCORE. Cumulative sum (CUSUM) analyses were performed for the EuroSCORE and the actual hospital mortality.Results. 5249 patients underwent CABG of which 89 (1.7%) died. The mean additive EuroSCORE was 3.5+/-2.5 (0-17) (median 3.0) and the mean logistic EuroSCORE was 4.0+/-5.5 (0-73) (median 2.4). The area under the ROC curve was 0.80+/-0.02 (95% confidence interval (CI) 0.76 to 0.84) for the additive and 0.81+/-

0.02 (0.77 to 0.85) for the logistic EuroSCORE. The predicted probability (hazard ratio) was different from the additive and logistic EuroSCOREs. The hospital mortality was half of the EuroSCOREs, resulting in positive variable lifeadjusted display curves. Conclusions. Both the additive and logistic EuroSCOREs are overestimating the in-hospital mortality risk in low-risk CABG patients. The logistic EuroSCORE is more accurate in highrisk patients compared with the additive EuroSCORE. Until a more accurate risk scoring system is available, we suggest being careful when comparing the quality of care of different centres based on risk-adjusted mortality rates.

Straten AH van

Peripheral Vascular Disease as a Predictor of Survival After Coronary Artery Bypass Grafting: Comparison With a Matched General Population

Straten AH van*, Firanescu C*, Soliman Hamad MA*, Tan ME, Woorst JF ter*, Martens EJ*, Zundert AA van*

Ann Thorac Surg. 2010;89(2):414-20

BACKGROUND: The European system for cardiac operative risk evaluation, the most popular European scoring system in cardiac surgery, uses the extracardiac arteriopathy as a risk factor for early mortality. We studied the effect of peripheral vascular disease (PVD) on early and late mortality in a large group of patients undergoing isolated coronary artery bypass surgery (CABG) surgery. METHODS: During a tenyear period (January 1998 through December 2007) 10,626 patients underwent isolated CABG in our hospital. The primary endpoints of this study were early and late all-cause mortality. For each year of the study period, general population cohorts were matched with the patient groups for age and gender (expected survival). RESULTS: Out of 10,504 patients included in the analysis, 1,222 (11.63%) patients had PVD. The PVD was identified as an independent risk factor for late mortality (death at any time after hospital discharge) (hazard ratio of 1.67 [1.43 to 1.95], $p < 0.0001$), but not for early mortality (death within 30 days or before discharge) (hazard ratio of 1.06 [0.70 to 1.60], $p = 0.776$). Patients without PVD had a better survival than patients with PVD (log-rank $p < 0.0001$) and even a better survival compared to the normal Dutch population survival (p value < 0.002). The PVD patients had a worse than expected survival (log-rank $p < 0.0001$). CONCLUSIONS: Peripheral vascular disease is an independent risk factor only for late mortality but not for early mortality. Compared with age-matched and sex-matched cohorts from the general Dutch population, the ten-year survival of patients with peripheral vascular disease was worse; whereas the survival of patients with no peripheral vascular disease was better.

Straten AH van

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Straten AH van

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Straten AH van

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J Cardiothorac Vasc Anesth. 2010;24:413-7. [Epub ahead of print]

OBJECTIVES: Perioperative transfusion of red blood cells is associated with increased morbidity and mortality. The authors investigated the correlation between preoperative risk factors and the number of red blood cell units received in patients undergoing coronary artery bypass graft surgery. DESIGN: A retrospective analysis of prospectively collected data. SETTING: A single-center study performed in an educational hospital. PARTICIPANTS: All patients who underwent isolated coronary artery bypass graft surgery between 1998 and 2007 (N = 10,626) were included. INTERVENTIONS: Isolated coronary artery bypass graft surgery. MEASUREMENTS AND MAIN RESULTS: Univariate and multivariate logistic regression analyses were performed to investigate the impact of preoperative and perioperative factors on transfusion of 1 or more units of red blood cells. The following independent risk factors for receiving red blood cell units were identified: age, female sex, low body surface area, low left ventricular ejection fraction (<35%), emergency operation, previous cardiac surgery, low preoperative hemoglobin, and low preoperative creatinine clearance. Perioperative risk factors were the use of extracorporeal circulation, longer bypass time, use of crystalloid cardioplegia, the need for intra-aortic balloon pump, perioperative myocardial infarction, and re-exploration for any cause. CONCLUSIONS: In this study, the authors identified risk factors for receiving red blood cells in patients undergoing coronary artery bypass graft surgery. The authors were able to implement these factors in their daily practice by sharpening the criteria for the direct availability of red blood cells in the operating room.

Straten AH van

The Impact of New-Onset Postoperative Atrial Fibrillation on Mortality After Coronary Artery Bypass Grafting

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Straten AH van

Thrombocytopenia after aortic valve replacement: comparison between mechanical and biological valves

Straten AH van*, Hamad MA*, Berreklouw E*, Woorst JF ter*, Martens EJ*, Tan ME*

J Heart Valve Dis. 2010 May;19(3):394-9

BACKGROUND AND AIM OF THE STUDY: Concerns have been recently raised regarding the postoperative decrease in platelet count after aortic valve replacement (AVR). Thus, a retrospective analysis was conducted of patients after AVR with regards to postoperative platelet count. METHODS: The data were analyzed from all patients undergoing AVR with (n = 829) or without (n = 1,230) coronary artery bypass grafting (CABG) at a single center between January 1998 and May 2009. The lowest (minimum) platelet count within the first five postoperative days was determined. RESULTS: The patients received either an ATS mechanical prosthesis (ATS; n = 401), a St. Jude Medical mechanical prosthesis (SJM; n = 791), a Carpentier-Edwards Perimount bioprosthesis (CEP; n = 618), a Medtronic Freestyle stentless bioprosthesis (FRE; n = 213), or a Sorin Freedom Solo stentless bioprosthesis (SFS; n = 36). By using a multivariate linear regression model, the following independent risk factors for a lower postoperative platelet count were revealed: age, body surface area, active endocarditis, preoperative platelet count, duration of extracorporeal circulation, number of grafts, valve size, and units of transfused fresh-frozen plasma and red blood cells. On entering the type of prosthesis into the multivariate linear regression analysis, together with the other risk factors, patients with CEP and FRE valve prostheses had a lower minimum postoperative platelet count than those with mechanical prostheses (ATS and SJM). CONCLUSION: Patients undergoing AVR with the Carpentier-Edwards Perimount bioprosthesis or a Medtronic Freestyle stentless bioprosthesis had a lower minimum platelet count within the first five postoperative days, compared to patients receiving ATS and St. Jude Medical mechanical prostheses. No differences were identified between the Sorin Freedom Solo and all other valve prostheses.

Tan ME

Effect of storage time of transfused plasma on early and late mortality after coronary artery bypass grafting

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Verstappen F

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Peripheral Vascular Disease as a Predictor of Survival After Coronary Artery Bypass Grafting: Comparison With a Matched General Population

Straten AH van*, Firanescu C*, Soliman Hamad MA*, Tan ME, Woorst JF ter*, Martens EJ*, Zundert AA van*

Ann Thorac Surg. 2010;89(2):414-20

Voor abstract zie: Straten AH van

Woorst JF ter

Preoperative ejection fraction as a predictor of survival after coronary artery bypass grafting: comparison with a matched general population

Soliman Hamad MA*, Straten AH van*, Schonberger JP*, Woorst JF ter*, Wolf AM de*, Martens EJ*, Zundert AA van*

J Cardiothorac Surg. 2010 Apr 23;5(1):29

Voor abstract zie: Soliman Hamad MA

Woorst JF ter

Preoperative Prediction of Early Mortality in Patients with Low Ejection Fraction Undergoing Coronary Artery Bypass Grafting

Soliman Hamad MA*, Van Straten AH*, Van Zundert AA*, Ter Woorst JF*, Martens EJ, Penn OC*

J Card Surg. 2011 Jan;26(1):9-15. Epub 2010 Nov 14, 2010 Nov 14

Voor abstract zie: Soliman Hamad MA

Woorst JF ter

Risk Factors for Red Blood Cell Transfusion After Coronary Artery Bypass Graft Surgery

Straten AH van*, Kats S*, Bekker MW*, Verstappen F*, Woorst JF ter*, Zundert A van*, Soliman Hamad MA*

J Cardiothorac Vasc Anesth. 2010;24:413-7. [Epub ahead of print]

Voor abstract zie: Straten AH van

Woorst JF ter

Thrombocytopenia after aortic valve replacement: comparison between mechanical and biological valves

Straten AH van*, Hamad MA*, Berreklouw E*, Woorst JF ter*, Martens EJ*, Tan ME*

J Heart Valve Dis. 2010 May;19(3):394-9

Voor abstract zie: Straten AH van

Zebele C,
Excision of noncoronary aortic cusp fibroelastoma via ministernotomy
Zebele C*, Tan ME*, Hamad MA*
Asian Cardiovasc Thorac Ann. 2010 Dec;18(6):596-7

** = werkzaam in het Catharina-ziekenhuis*

Chirurgie

Artikelen

Acht MM van

Neoadjuvant radiotherapy of primary irresectable unicentric Castleman's disease: a case report and review of the literature

Vries IA de, Acht MM van*, Demeyere TB, Lybeert ML*, Zoete JP de*, Nieuwenhuijzen GA*

Radiat Oncol. 2010;5(1):7

Voor abstract zie: Vries IA de

Berende CA

Evaluation of laparoscopic sleeve gastrectomy on weight loss and co-morbidity

Nienhuijs SW*, Zoete JP de*, Berende CA*, Hingh IH de*, Smulders JF*

Int J Surg. 2010;8(4):302-4., Epub 2010 Mar 19

Voor abstract zie: Nienhuijs SW

Botden SM

Developing a realistic model for the training of the laparoscopic nissen fundoplication

Botden SM*, Goossens R, Jakimowicz JJ*

Simul Healthc. 2010 Jun;5(3):173-8

INTRODUCTION:: A realistic human anatomy simulation model developed for training to perform laparoscopic Nissen fundoplication (antireflux surgery) could reduce the need and use of animal tissue models. This article elaborates the designing process of this model and the development process used to create the abdominal organs with realistic haptic feedback. METHOD:: Before developing the artificial organs, first the mechanical characteristics of human tissue were examined. Next, separate animal organs that resembled these characteristics the closest was used to create the model. The haptic feedback of the intra-abdominal organs variables studied included tissue, geometry, and context. The stress-strain curves of the different tissues were calculated and compared with the properties of industrial materials to find the best material for the production of the organs. RESULTS:: The aspects that influenced haptic feedback as determined above and used to select the most promising material groups were: E-modulus, density, coefficient of friction, sensitivity to tearing, wall thickness, and shelf life. Based on these criteria, silicone and latex materials mimiked human tissue best. Changeable velvet rope was used for connections of the organs to the surface and other simulated tissue. CONCLUSIONS:: A reusable modular model of the upper abdomen anatomy with haptic properties was created for training of upper gastrointestinal surgery laparoscopic procedures, such as the Nissen fundoplication

Botden SM

Training for laparoscopic Nissen fundoplication with a newly designed model: a replacement for animal tissue models?

Botden SM*, Christie L, Goossens R, Jakimowicz JJ*

Surg Endosc. 2010 Dec;24(12):3134-40. Epub 2010 Jun 5

BACKGROUND: To bridge the early learning curve for laparoscopic Nissen fundoplication from the clinical setting to a safe environment, training models can be used. This study aimed to develop a reusable, low-cost model to be used for training in laparoscopic Nissen fundoplication procedure as an alternative to the use of animal tissue models. METHODS: From artificial organs and tissue, an anatomic model of the human upper abdomen was developed for training in performing laparoscopic Nissen fundoplication. The 20 participants and tutors in the European Association for Endoscopic Surgery (EAES) upper gastrointestinal surgery course completed four complementary tasks of laparoscopic Nissen fundoplication with the artificial model, then compared the realism, haptic feedback, and training properties of the model with those of animal tissue models. RESULTS: The main difference between the two training models was seen in the properties of the stomach. The wrapping of the stomach in the artificial model was rated significantly lower than that in the animal tissue model (mean, 3.6 vs. 4.2; $p = 0.010$). The main criticism of the stomach of the artificial model was that it was too rigid for making a proper wrap. The suturing of the stomach wall, however, was regarded as fairly realistic (mean, 3.6). The crura on the artificial model were rated better (mean, 4.3) than those on the animal tissue (mean, 4.0), although the difference was not significant. The participants regarded the model as a good to excellent (mean, 4.3) training tool. CONCLUSION: The newly developed model is regarded as a good tool for training in laparoscopic Nissen fundoplication procedure. It is cheaper, more durable, and more readily available for training and can therefore be used in every training center. The stomach of this model, however, still needs improvement because it is too rigid for making the wrap.

Buth J

Infrarenal abdominal aortic aneurysm with concomitant urologic malignancy: treatment results in the era of endovascular aneurysm repair

Habets J*, Buth J*, Cuypers PW*, Nienhuijs SW*, Hingh IH de*

Vascular. 2010;18(1):14-9

Voor abstract zie: Habets J

Buth J

Long-term outcome of open or endovascular repair of abdominal aortic aneurysm

Bruin JL de, Baas AF, Buth J*, Prinssen M, Verhoeven EL, Cuypers PW*, Sambeek MR van*, Balm R Grobbee DE, Blankensteijn JD; DREAM Study Group

N Engl J Med. 2010 May 20;362(20):1881-9

BACKGROUND: For patients with large abdominal aortic aneurysms, randomized trials have shown an initial overall survival benefit for elective endovascular repair over conventional open repair. This survival difference, however, was no longer significant in the second year after the procedure. Information regarding the comparative outcome more than 2 years after surgery is important for clinical decision making. METHODS: We conducted a long-term, multicenter, randomized, controlled trial comparing open repair with endovascular repair in 351 patients with an abdominal aortic aneurysm of at least 5 cm in diameter who were considered suitable candidates for both techniques. The primary outcomes were rates of death from any cause and reintervention. Survival was calculated with the use of Kaplan-

Meier methods on an intention-to-treat basis. RESULTS: We randomly assigned 178 patients to undergo open repair and 173 to undergo endovascular repair. Six years after randomization, the cumulative survival rates were 69.9% for open repair and 68.9% for endovascular repair (difference, 1.0 percentage point; 95% confidence interval [CI], -8.8 to 10.8; P=0.97). The cumulative rates of freedom from secondary interventions were 81.9% for open repair and 70.4% for endovascular repair (difference, 11.5 percentage points; 95% CI, 2.0 to 21.0; P=0.03). CONCLUSIONS: Six years after randomization, endovascular and open repair of abdominal aortic aneurysm resulted in similar rates of survival. The rate of secondary interventions was significantly higher for endovascular repair.

Buzink SN

Do absorption and realistic distraction influence performance of component task surgical procedure?

Pluyter JR, Buzink SN*, Rutkowski AF, Jakimowicz JJ*

Surg Endosc. 2010 Apr;24(4):902-7

BACKGROUND: Surgeons perform complex tasks while exposed to multiple distracting sources that may increase stress in the operating room (e.g., music, conversation, and unadapted use of sophisticated technologies). This study aimed to examine whether such realistic social and technological distracting conditions may influence surgical performance. METHODS: Twelve medical interns performed a laparoscopic cholecystectomy task with the Xitact LC 3.0 virtual reality simulator under distracting conditions (exposure to music, conversation, and nonoptimal handling of the laparoscope) versus nondistracting conditions (control condition) as part of a 2 x 2 within-subject experimental design. RESULTS: Under distracting conditions, the medical interns showed a significant decline in task performance (overall task score, task errors, and operating time) and significantly increased levels of irritation toward both the assistant handling the laparoscope in a nonoptimal way and the sources of social distraction. Furthermore, individual differences in cognitive style (i.e., cognitive absorption and need for cognition) significantly influenced the levels of irritation experienced by the medical interns. CONCLUSION: The results suggest careful evaluation of the social and technological sources of distraction in the operation room to reduce irritation for the surgeon and provision of proper preclinical laparoscope navigation training to increase security for the patient.

Buzink SN

Influence of anatomic landmarks in the virtual environment on simulated angled laparoscope navigation

Buzink SN*, Christie L, Goossens RH, de Ridder H, Jakimowicz JJ*

Surgical Endoscopy, 2010;24:2993-3001

BACKGROUND: The aim of this study is to investigate the influence of the presence of anatomic landmarks on the performance of angled laparoscope navigation on the SimSurgery SEP simulator. METHODS: Twenty-eight experienced laparoscopic surgeons (familiar with 30° angled laparoscope, >100 basic laparoscopic procedures, >5 advanced laparoscopic procedures) and 23 novices (no laparoscopy experience) performed the Camera Navigation task in an abstract virtual environment (CNbox) and in a virtual representation of the lower abdomen (CN-abdomen). They also rated

the realism and added value of the virtual environments on seven-point scales. RESULTS: Within both groups, the CN-box task was accomplished in less time and with shorter tip trajectory than the CN-abdomen task (Wilcoxon test, $p < 0.05$). No significant differences were found between the performances of the experienced participants and the novices on the CN tasks (Mann-Whitney U test, $p > 0.05$). In both groups, the CN tasks were perceived as hard work and more challenging than anticipated. CONCLUSIONS: Performance of the angled laparoscope navigation task is influenced by the virtual environment surrounding the exercise. The task was performed better in an abstract environment than in a virtual environment with anatomic landmarks. More insight is required into the influence and function of different types of intrinsic and extrinsic feedback on the effectiveness of preclinical simulator training.

Buzink SN
Training of basic laparoscopy skills on SimSurgery SEP
Buzink SN*, Goossens RHM, de Ridder H, Jakimowicz JJ*
Minimally Invasive Therapy & Allied Technologies 2010;19:35-41

The aim of this study was to assess the performance curve for novices training in bimanual tissue manipulation and angled laparoscope navigation, and compare those performances with the performances of experienced laparoscopic surgeons. The Camera Navigation task with a 30 degrees angled laparoscope and the Place Arrow task of the new SimSurgery SEP virtual reality simulator were used. Fourteen medical trainees (no laparoscopy experience) performed four training sessions within one week, including 15 repetitions of each task in total. The experienced participants (>50 procedures & familiar with angled laparoscope) performed each task twice. The performance on both tasks by the novices improved significantly over the training sessions. The experienced participants performed both tasks significantly better than the novices in repetition 3. After repetition 15, the performances of the novices on both tasks were of the same level as the performances of the experienced participants. By training on SimSurgery SEP, medical trainees can extensively improve their skills in navigation with 30 degrees angled laparoscope and bimanual tissue manipulation. Further research should focus on the transfer of skills acquired on the simulator to the clinical setting. Knowledge on proficiency thresholds and training end-points for pre-clinical criterion-based training of different laparoscopic tasks also needs to be extended.

Buzink SN
Visuo-spatial Ability in Colonoscopy Simulator Training
Luursema JM, Buzink SN*, Verwey WB, Jakimowicz JJ*
Advances in Health Sciences Education 2010;15: 685-94

Visuo-spatial ability is associated with a quality of performance in a variety of surgical and medical skills. However, visuo-spatial ability is typically assessed using Visualization tests only, which led to an incomplete understanding of the involvement of visuo-spatial ability in these skills. To remedy this situation, the current study investigated the role of a broad range of visuo-spatial factors in colonoscopy simulator training. Fifteen medical trainees (no clinical experience in colonoscopy) participated in two psycho-metric test sessions to assess four visuo-spatial ability

factors. Next, participants trained flexible endoscope manipulation, and navigation to the cecum on the GI Mentor II simulator, for four sessions within 1 week. Visualization, and to a lesser degree Spatial relations were the only visuo-spatial ability factors to correlate with colonoscopy simulator performance. Visualization additionally covaried with learning rate for time on task on both simulator tasks. High Visualization ability indicated faster exercise completion. Similar to other endoscopic procedures, performance in colonoscopy is positively associated with Visualization, a visuo-spatial ability factor characterized by the ability to mentally manipulate complex visuo-spatial stimuli. The complexity of the visuo-spatial mental transformations required to successfully perform colonoscopy is likely responsible for the challenging nature of this technique, and should inform training- and assessment design. Long term training studies, as well as studies investigating the nature of visuo-spatial complexity in this domain are needed to better understand the role of visuo-spatial ability in colonoscopy, and other endoscopic techniques

Buzink SN

Do Basic Psychomotor Skills Transfer Between Different Image-based Procedures?

Buzink SN*, Goossens RH, Schoon EJ*, Ridder H de, Jakimowicz JJ*

World J Surg. 2010 May;34(5):933-40

BACKGROUND: Surgical techniques that draw from multiple types of image-based procedures (IBP) are increasing, such as Natural Orifice Transluminal Endoscopic Surgery, fusing laparoscopy and flexible endoscopy. However, little is known about the relation between psychomotor skills for performing different types of IBP. For example, do basic psychomotor colonoscopy and laparoscopy skills interact? METHODS: Following a cross-over study design, 29 naïve endoscopists were trained on the Simbionix GI Mentor and the SimSurgery SEP simulators. Group C (n = 15) commenced with a laparoscopy session, followed by four colonoscopy sessions and a second laparoscopy session. Group L (n = 14) started with a colonoscopy session, followed by four laparoscopy sessions and a second colonoscopy session. RESULTS: No significant differences were found between the performances of group L and group C in their first training sessions on either technique. With additional colonoscopy training, group C outperformed group L in the second laparoscopy training session on the camera navigation task. CONCLUSIONS: Overall, training in the basic colonoscopy tasks does not affect performance of basic laparoscopy tasks (and vice versa). However, to limited extent, training of basic psychomotor skills for colonoscopy do appear to contribute to the performance of angled laparoscope navigation tasks. Thus, training and assessment of IBP type-specific skills should focus on each type of tasks independently. Future research should further investigate the influence of psychometric abilities on the performance of IBP and the transfer of skills for physicians who are experienced in one IBP type and would like to become proficient in another type of IBP.

Buzink SN

Risk-sensitive events during laparoscopic cholecystectomy: the influence of the integrated operating room and a preoperative checklist tool

Buzink SN*, Lier L van*, Hingh IH de*, Jakimowicz JJ*

Surg Endosc. 2010 Aug;24(8):1990-5. Epub 2010 Feb 5

BACKGROUND: Awareness of the relative high rate of adverse events in laparoscopic surgery created a need to safeguard quality and safety of performance better. Technological innovations, such as integrated operating room (OR) systems and checklists, have the potential to improve patient safety, OR efficiency, and surgical outcomes. This study was designed to investigate the influence of the integrated OR system and Pro/cheQ, a digital checklist tool, on the number and type of equipment- and instrumentrelated risk-sensitive events (RSE) during laparoscopic cholecystectomies. METHODS: Forty-five laparoscopic cholecystectomies were analyzed on the number and type of RSE; 15 procedures were observed in the cart-based OR setting, 15 in an integrated OR setting, and 15 in the integrated OR setting while using Pro/cheQ. RESULTS: In the cart-based OR setting and the integrated OR setting, at least one event occurred in 87% of the procedures, which was reduced to 47% in the integrated OR setting when using Pro/cheQ. During 45 procedures a total of 57 RSE was observed-most were caused by equipment that was not switched on or with the wrong settings. In the integrated OR while using Pro/cheQ the number of RSE was reduced by 65%. CONCLUSIONS: Using both an integrated OR and Pro/cheQ has a stronger reducing effect on the number of RSE than using an integrated OR alone. The Pro/cheQ tool supported the optimal workflow in a natural way and raised the general safety awareness amongst all members of the surgical team. For tools such as integrated OR systems and checklists to succeed it is pivotal not to underestimate the value of the implementation process. To further improve safety and quality of surgery, a multifaceted approach should be followed, focusing on the performance and competence of the surgical team as a whole.

Cuypers PW

Infrarenal abdominal aortic aneurysm with concomitant urologic malignancy: treatment results in the era of endovascular aneurysm repair

Habets J*, Buth J*, Cuypers PW*, Nienhuijs SW*, Hingh IH de*

Vascular. 2010;18(1):14-9

Voor abstract zie: Habets J

Cuypers PW

Long-term outcome of open or endovascular repair of abdominal aortic aneurysm

Bruin JL de, Baas AF, Buth J*, Prinssen M, Verhoeven EL, Cuypers PW*, Sambeek MR van*, Balm R, Grobbee DE, Blankensteijn JD; DREAM Study Group

N Engl J Med. 2010 May 20;362(20):1881-9

Voor abstract zie: Buth J

Dovern E

Hyperthermic intraperitoneal chemotherapy added to the treatment of ovarian cancer. A review of achieved results and complications

Dovern E*, Hingh IH de *, Verwaal VJ, van Driel WJ, Nienhuijs SW

Eur J Gynaecol Oncol. 2010;31(3):256-61

OBJECTIVE: The late revelation of ovarian cancer ensures it as the leading cause of death among gynecologic cancers. Cytoreductive surgery (CRS) and intravenous (i.v.) chemotherapy have been the cornerstone for a long time to treat this disease. More recently, the modality of intraperitoneal administration of chemotherapy under hyperthermic conditions (HIPEC) has been added. This review surveys the results of HIPEC added to CRS in ovarian cancer. METHODS: A multi-database search was conducted focusing on mortality, morbidity and overall and disease-free (DF) survival rates. RESULTS: 16 studies were identified reporting the results of CRS followed by HIPEC of 546 patients with advanced ovarian cancer. Postoperative mortality was reported for 14 out of 481 patients in total (2.9%). The major morbidity rate varied between 3.4 and 50.0%. In all but one study (533 patients), 185 events were reported (34.5%) and 21 re-interventions after 476 operations (4.4%). Survival data ranged from 10.0 to 57.1 months for the DF survival and from 19.0 to 76.1 months for the overall survival. Optimal cytoreduction and recurrent disease were associated with a better outcome in selected cases. CONCLUSIONS: Adding HIPEC to the current treatment modalities for ovarian cancer seems to be feasible. Improved survival rates have been reported at the cost of acceptable mortality rates. Nevertheless, there was a selection bias, the morbidity should not be underestimated and it is unclear yet which patient will benefit most from this treatment. Randomized controlled trials will provide an answer to this question.

Gerardu VC

From the Cochrane library: Ginkgo biloba for intermittent claudication

Nicolaï SP*, Gerardu VC*, Kruidenier LM, Prins MH, Teijink JA*

Vasa. 2010 May;39(2):153-8

Voor abstract zie: Nicolaï SP

Grootenboer N

Systematic review and meta-analysis of sex differences in outcome after intervention for abdominal aortic aneurysm

Grootenboer N*, Sambeek MR van*, Arends LR, Hendriks JM, Hunink MG, Bosch JL

Br J Surg. 2010 Aug;97(8):1169-79. Epub 2010 Jun 16.

BACKGROUND:: The aim of this study was to assess possible differences in mortality between men and women with an abdominal aortic aneurysm (AAA) treated either by elective repair or following aneurysm rupture. METHODS:: A systematic literature search was performed using the MEDLINE, Cochrane and Embase databases. Data were analysed by means of bivariate random-effects meta-analysis. Data were pooled and odds ratios (ORs) calculated for women compared with men. RESULTS:: Sixty-one studies (516 118 patients) met the predetermined inclusion criteria. Twenty-six reported on elective open AAA repair, 21 on elective endovascular repair, 25 on open repair for ruptured AAA and one study on endovascular repair for ruptured AAA. Mortality rates for women compared with men were 7.6 versus 5.1 per

cent (OR 1.28, 95 per cent confidence interval (c.i.) 1.09 to 1.49) for elective open repair, 2.9 versus 1.5 per cent (OR 2.41, 95 per cent c.i. 1.14 to 5.15) for elective endovascular repair, and 61.8 versus 42.2 per cent (OR 1.16, 95 per cent c.i. 0.97 to 1.37) in the group that had open repair for rupture. The group that had endovascular repair for ruptured AAA was too small for meaningful analysis. CONCLUSION:: Women with an AAA had a higher mortality rate following elective open and endovascular repair.

Habets J

Infrarenal abdominal aortic aneurysm with concomitant urologic malignancy: treatment results in the era of endovascular aneurysm repair

Habets J*, Buth J*, Cuypers PW*, Nienhuijs SW*, Hingh IH de*

Vascular. 2010;18(1):14-9

During diagnostic workup for urologic malignancies, an abdominal aortic aneurysm (AAA) is identified in a proportion of patients. In the era of open AAA repair, these patients presented a surgical dilemma with regard to the sequence of the operations: cancer treatment first or AAA repair first? Previous assessments have concluded that irrespective of the followed strategy, the early and mediumterm mortality from the two operative procedures in this patient category was significant. With the introduction of endovascular aneurysm repair (EVAR), the mortality and morbidity associated with the treatment of both pathologic conditions may be more favorable than with open aneurysm repair. The objective of this study was to assess, in an institutional series of patients receiving EVAR, the early and long-term survival and complication rates in patients with urologic malignancies. In a series of 385 patients receiving EVAR, 14 had a concomitant urologic malignancy: renal cell carcinoma (5 patients), prostate carcinoma (6 patients), and carcinoma of the bladder (3 patients). The first-month mortality was nil. Long-term survival was 80%, 83%, and 67% for the three tumor types, respectively. EVAR offers improved treatment in patients with concomitant AAA and urologic malignancy and should be considered the first choice for these patients.

Hingh IH de

Predictors and survival of synchronous peritoneal carcinomatosis of colorectal origin: A populationbased study

Lemmens VE, Klaver YL*, Verwaal VJ, Rutten HJ*, Coebergh JW, Hingh IH de *

Int J Cancer. 2010 Aug 16

Voor abstract zie: Klaver YL

Hingh IH de

Evaluation of laparoscopic sleeve gastrectomy on weight loss and co-morbidity

Nienhuijs SW*, Zoete JP de*, Berende CA*, Hingh IH de*, Smulders JF*

Int J Surg. 2010;8(4):302-4. Epub 2010 Mar 19

Voor abstract zie: Nienhuijs SW

Hingh IH de

Hyperthermic intraperitoneal chemotherapy added to the treatment of ovarian cancer. A review of achieved results and complications

Dovern E*, de Hingh IH*, Verwaal VJ, van Driel WJ, Nienhuijs SW*

Eur J Gynaecol Oncol. 2010;31(3):256-61

Voor abstract zie: Dovern E

Hingh IH de

Infrarenal abdominal aortic aneurysm with concomitant urologic malignancy: treatment results in the era of endovascular aneurysm repair

Habets J*, Buth J*, Cuypers PW*, Nienhuijs SW*, Hingh IH de*

Vascular. 2010;18(1):14-9

Voor abstract zie: Habets J

Hingh IH de

Intraoperative hyperthermic intraperitoneal chemotherapy after cytoreductive surgery for peritoneal carcinomatosis in an experimental model

Klaver YL*, Hendriks T, Lomme RM, Rutten HJ*, Bleichrodt RP, de Hingh IH*

Br J Surg. 2010 Dec;97(12):1874-80, Epub 2010 Aug 30

Voor abstract zie: Klaver YL

Hingh IH de

Pain after conventional versus Ligasure haemorrhoidectomy. A meta-analysis

Nienhuijs SW*, Hingh IH de*

Int J Surg. 2010;8(4):269-73, Epub 2010 Apr 11

Voor abstract zie: Nienhuijs SW

Hingh IH de

Preoperative biliary drainage for cancer of the head of the pancreas

Gaag NA van der, Rauws EA, Eijck CH van, Bruno MJ, Harst E van der, Kubben FJ, Gerritsen JJ, Greve JW, Gerhards MF, Hingh IH de*, Klinkenbijl JH, Nio CY, Castro SM de, Busch OR, Gulik TM van,Bossuyt PM, Gouma DJ

N Engl J Med. 2010;362(2):129-37

BACKGROUND: The benefits of preoperative biliary drainage, which was introduced to improve the postoperative outcome in patients with obstructive jaundice caused by a tumor of the pancreatic head, are unclear. METHODS: In this multicenter, randomized trial, we compared preoperative biliary drainage with surgery alone for patients with cancer of the pancreatic head. Patients with obstructive jaundice and a bilirubin level of 40 to 250 micromol per liter (2.3 to 14.6 mg per deciliter) were randomly assigned to undergo either preoperative biliary drainage for 4 to 6 weeks, followed by surgery, or surgery alone within 1 week after diagnosis. Preoperative biliary drainage was attempted primarily with the placement of an endoprosthesis by means of endoscopic retrograde cholangiopancreatography. The primary outcome was the rate of serious complications within 120 days after randomization. RESULTS: We enrolled 202 patients; 96 were assigned to undergo early surgery and 106 to undergo preoperative biliary drainage; 6 patients were excluded from the analysis. The rates of serious complications were 39% (37 patients) in the early-surgery group

and 74% (75 patients) in the biliary-drainage group (relative risk in the early-surgery group, 0.54; 95% confidence interval [CI], 0.41 to 0.71; P<0.001). Preoperative biliary drainage was successful in 96 patients (94%) after one or more attempts, with complications in 47 patients (46%). Surgery-related complications occurred in 35 patients (37%) in the early-surgery group and in 48 patients (47%) in the biliary-drainage group (relative risk, 0.79; 95% CI, 0.57 to 1.11; P=0.14). Mortality and the length of hospital stay did not differ significantly between the two groups. CONCLUSIONS: Routine preoperative biliary drainage in patients undergoing surgery for cancer of the pancreatic head increases the rate of complications.

Hingh IH de
Preoperative biliary drainage for pancreatic head tumours: more complications
van der Gaag NA Rauws EA, van Eijck CH, Bruno MJ, van der Harst E, Kubben FJ, Gerritsen JJ, Greve JW, Gerhards MF, de Hingh IH*, Klinkenbijl JH, Yung Nio C, de Castro SM, Busch OR, van Gulik TM, Bosssuyt PM, Gouma DJ
Ned Tijdschr Geneeskd. 2010;154(29):A1883

Hingh IH de
Reduction of in-hospital mortality following regionalisation of pancreatic surgery in the south-east of The Netherlands
Nienhuijs SW*, Rutten HJ*, Luiten EJ, Repelaer van Driel OJ, Reemst PH, Lemmens VE, Hingh IH de*
Eur J Surg Oncol. 2010 Jul;36(7):652-6. Epub 2010 May 26
Voor abstract zie: Nienhuijs SW

Hingh IH de
Results of cytoreductive surgery and hyperthermic intraperitoneal chemotherapy after early failure of adjuvant systemic chemotherapy
Klaver YL*, de Hingh IH*, Boot H, Verwaal VJ
J Surg Oncol. 2010 Dec 29. [Epub ahead of print]
Voor abstract zie: Klaver YL

Hingh IH de
Risk-sensitive events during laparoscopic cholecystectomy: the influence of the integrated operating room and a preoperative checklist tool
Buzink SN*, Lier L van*, Hingh IH de*, Jakimowicz JJ*
Surg Endosc. 2010 Aug;24(8):1990-5. Epub 2010 Feb 5
Voor abstract zie: Buzink SN

Hingh IH de
Therapeutic delay and survival after surgery for cancer of the pancreatic head with or without preoperative biliary drainage
Eshuis WJ, van der Gaag NA, Rauws EA, van Eijck CH, Bruno MJ, Kuipers EJ, Coene PP, Kubben FJ, Gerritsen JJ, Greve JW, Gerhards MF, de Hingh IH*, Klinkenbijl JH, Nio CY, de Castro SM, Busch OR, van Gulik TM, Bossuyt PM, Gouma DJ
Ann Surg. 2010 Nov;252(5):840-9

OBJECTIVE: To evaluate the relation between delay in surgery because of preoperative biliary drainage (PBD) and survival in patients scheduled for surgery for pancreatic head cancer. BACKGROUND: Patients with obstructive jaundice due to pancreatic head cancer can undergo PBD. The associated delay of surgery can lead to more advanced cancer stages at surgical exploration, affecting resection rate and survival. METHODS: We conducted a multicenter, randomized controlled clinical trial to compare PBD with early surgery (ES) for pancreatic head cancer for complications. We obtained Kaplan-Meier estimates of overall survival for patients with pathology-proven malignancy and compared survival functions of ES and PBD groups using log-rank test statistics. Multivariable Cox regression analyses were performed to evaluate the prognostic role of time to surgery for overall survival. RESULTS: Mean times from randomization to surgery were 1.2 (0.9-1.5) and 5.1 (4.8-5.5) weeks in the ES and PBD groups, respectively ($P < 0.001$). In the ES group, 60 (67%) of 89 patients underwent resection, versus 53 (58%) of 91 patients in the PBD group ($P = 0.20$). Median survival after randomization was 12.2 (9.1-15.4) months in the ES group versus 12.7 (8.9-16.6) months in the PBD group ($P = 0.91$). A longer time to surgery was significantly associated with slightly lower mortality rate after surgery (hazard ratio = 0.90, 95% CI, 0.83-0.97), when taking into account resection, bilirubin, complications, pancreatic adenocarcinoma, tumor-positive lymph nodes, and microscopically residual disease. CONCLUSIONS: In patients with pancreatic head cancer, the delay in surgery associated with PBD does not impair or benefit survival rate.

Hingh IH de

Vacuum grasping as a manipulation technique for minimally invasive surgery

Vonck D, Goossens RH, Eijk DJ van, Hingh IH de*, Jakimowicz JJ*

Surg Endosc. 2010 Oct;24(10):2418-23. Epub 2010 Mar 2

BACKGROUND: Laparoscopic surgery requires specially designed instruments. Bowel tissue damage is considered one of the most serious forms of lesion, specifically perforation of the bowel. METHODS: An experimental setting was used to manipulate healthy pig bowel tissue via two vacuum instruments. During the experiments, two simple manipulations were performed for both prototypes by two experienced surgeons. Each manipulation was repeated 20 times for each prototype at a vacuum level of 60 kPa and 20 times for each prototype at a vacuum level of 20 kPa. All the manipulations were macroscopically assessed by two experienced surgeons in terms of damage to the bowel. RESULTS: In 160 observations, 63 ecchymoses were observed. All 63 ecchymoses were classified as not relevant and negligible. No serosa or seromuscular damages and no perforations were observed. CONCLUSION: Vacuum instruments such as the tested prototypes have the potential to be used as grasper instruments in minimally invasive surgery.

Jakimowicz JJ

Developing a realistic model for the training of the laparoscopic nissen fundoplication

Botden SM*, Goossens R, Jakimowicz JJ*

Simul Healthc. 2010 Jun;5(3):173-8

Voor abstract zie: Botden SM

Jakimowicz JJ
Do Basic Psychomotor Skills Transfer Between Different Image-based Procedures?
Buzink SN*, Goossens RH, Schoon EJ*, Ridder H de, Jakimowicz JJ*
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Surgical Endoscopy, 2010; 24:2993-3001
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Jakimowicz JJ
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Risk-sensitive events during laparoscopic cholecystectomy: the influence of the integrated operating room and a preoperative checklist tool
Buzink SN*, Lier L van*, Hingh IH de*, Jakimowicz JJ*
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Jakimowicz JJ
Training for laparoscopic Nissen fundoplication with a newly designed model: a replacement for animal tissue models?
Botden SM*, Christie L, Goossens R, Jakimowicz JJ*
Surg Endosc. 2010 Dec;24(12):3134-40. Epub 2010 Jun 5
Voor abstract zie: Botden SM

Jakimowicz JJ

Vacuum grasping as a manipulation technique for minimally invasive surgery

Vonck D, Goossens RH, Eijk DJ van, Hingh IH de*, Jakimowicz JJ*

Surg Endosc. 2010 Oct;24(10):2418-23. Epub 2010 Mar 2

Voor abstract zie: Hingh IH de

Klaver YL

Intraoperative hyperthermic intraperitoneal chemotherapy after cytoreductive surgery for peritoneal carcinomatosis in an experimental model

Klaver YL*, Hendriks T, Lomme RM, Rutten HJ*, Bleichrodt RP, de Hingh IH*

Br J Surg. 2010 Dec;97(12):1874-80. Epub 2010 Aug 30

BACKGROUND: The combination of cytoreductive surgery (CS) and hyperthermic intraperitoneal chemotherapy (HIPEC) is the treatment of choice for selected patients with peritoneal carcinomatosis (PC) of colorectal origin. However, it remains to be proven whether the addition of HIPEC to CS is essential for the reported survival benefit. METHODS: Sixty WAG/Rij rats were inoculated intraperitoneally with the rat colonic carcinoma cell line CC-531. Animals were randomized into three treatment groups: CS alone, CS followed by HIPEC (mitomycin 15 mg/m(2)) and CS followed by HIPEC (mitomycin 35 mg/m(2)). Survival was the primary outcome parameter. RESULTS: The median survival of rats treated with CS alone was 43 days. Rats receiving HIPEC 15 mg/m(2) and HIPEC 35 mg/m(2) both had a significantly longer median survival of 75 days ($P = 0.003$) and 97 days ($P < 0.001$) respectively. Rats receiving HIPEC showed a significantly lower tumour load at autopsy compared with rats treated with CS alone. CONCLUSION: A combination of CS and HIPEC results in longer survival than CS alone in rats with PC of colorectal origin

Klaver YL

Predictors and survival of synchronous peritoneal carcinomatosis of colorectal origin: A population-based study

Lemmens VE, Klaver YL*, Verwaal VJ, Rutten HJ*, Coebergh JW, de Hingh IH

Int J Cancer. 2010 Aug 16

The aim of this study was to provide population-based data on incidence and prognosis of synchronous peritoneal carcinomatosis, and to evaluate predictors for its development. Diagnosed in 1995-2008, 18 738 cases of primary colorectal cancer were included. Predictors of peritoneal carcinomatosis were analysed by multivariable logistic regression analysis. Median survival in months was calculated by site of metastasis. In the study period, 904 patients were diagnosed with synchronous peritoneal carcinomatosis (4.8% of total, constituting 24% of patients presenting with M1 disease). The risk of peritoneal carcinomatosis was increased in case of advanced T-stage (T4 vs. T1,2: odds ratio (OR) 4.7, confidence limits 4.0-5.6), advanced N-stage (N0 vs. N1,2: OR 0.2 (0.1-0.2)), poor differentiation grade (OR 2.1 (1.8-2.5)), younger age (< 60 years vs. 70-79 years: OR 1.4 (1.1-1.7)), mucinous adenocarcinoma (OR 2.0 (1.6-2.4)), and right-sided localisation of primary tumour (left vs. right: OR 0.6 (0.5-0.7). Median survival of patients with peritoneum as single site of metastasis remained dismal (1995-2001: 7 (6-9) months; 2002-2008: 8 (6-11) months), contrasting the improvement among patients with liver metastases (1995-2001: 8 (7-9) months; 2002-2008: 12 (11-14) months. To conclude, synchronous

peritoneal metastases from colorectal cancer are more frequent among younger patients, and among patients with advanced T-stage, mucinous adenocarcinoma, right-sided tumours, and tumours which are poorly differentiated. The prognosis of synchronous peritoneal carcinomatosis remains poor with a median survival of 8 months, and even worse if concomitant metastases in other organs are present.

Klaver YL

Results of cytoreductive surgery and hyperthermic intraperitoneal chemotherapy after early failure of adjuvant systemic chemotherapy

Klaver YL*, de Hingh IH*, Boot H, Verwaal VJ.

J Surg Oncol. 2010 Dec 29. [Epub ahead of print]

BACKGROUND AND OBJECTIVES: Failure to respond to systemic chemotherapy is considered an exclusion criterion by some institutions for treatment with cytoreductive surgery and hyperthermic intraperitoneal chemotherapy (HIPEC). However, it is unknown if these patients benefit from HIPEC treatment. This study aimed to report on outcomes of HIPEC in patients who failed to respond to adjuvant systemic chemotherapy. METHODS: Patients were selected from a prospective database containing data on all patients who underwent HIPEC, using the following criteria: (1) Metachronous peritoneal carcinomatosis (PC) from colorectal origin, (2) adjuvant chemotherapy after primary tumor resection, (3) development of PC or local recurrence within 18 months after start of chemotherapy. Treatment and survival data were retrospectively collected. RESULTS: Twenty-one patients (29% male, mean age 57 years) were included. Median time to recurrence of disease was 9 months (range 2-15) after first chemotherapy administration. Median survival was 28 months (range 3-100). One- and 2-year survival were 71% and 43%, respectively. CONCLUSIONS: Patients who initially failed to respond to systemic adjuvant treatment showed a survival after HIPEC similar to results reported in literature in patients with unknown responsiveness. Failure to respond to previous adjuvant systemic treatment should therefore not be considered an exclusion criterion for HIPEC treatment.

Kusters M

Absence of tumor invasion into pelvic structures in locally recurrent rectal cancer: prediction with preoperative MR imaging

Dresen RC, Kusters M*, Daniels-Gooszen AW*, Cappendijk VC, Nieuwenhuijzen GA*, Kessels AG, Bruïne AP de, Beets GL, Rutten HJ*, Beets-Tan RG

Radiology. 2010 Jul;256(1):143-50

PURPOSE: To retrospectively assess the accuracy of preoperative magnetic resonance (MR) imaging for identification of tumor invasion into pelvic structures in patients with locally recurrent rectal cancer scheduled to undergo curative resection. MATERIALS AND METHODS: The institutional review board approved this study, and informed consent was waived because of the retrospective nature of the study. Preoperative MR images in 40 consecutive patients with locally recurrent rectal cancer scheduled to undergo curative treatment between October 2003 and November 2006 were analyzed retrospectively. Four observers with different levels of experience in reading pelvic MR images assessed tumor invasion into the following structures: bladder, uterus or seminal vesicles, vagina or prostate, left and right

pelvic walls, and sacrum. Sensitivity, specificity, positive predictive value, and negative predictive value were calculated, and a receiver operating characteristic curve was constructed. Surgical and/or histopathologic findings were used as the reference standard. Interobserver agreement was measured by using kappa statistics. RESULTS: Preoperative MR imaging was accurate for the prediction of tumor invasion into structures with negative predictive values of 93%-100% and areas under receiver operating characteristic curves of 0.79-1.00 for all structures and observers. Positive predictive values were 53%-100%. Disease was overstaged in 11 (observer 1), 22 (observer 2), 10 (observer 3), and nine (observer 4) structures and was understaged in nine (observer 3) and two (observer 4) structures. Assessment failures were mainly because of misinterpretation of diffuse fibrosis, especially at the pelvic side walls. Interobserver agreement ranged between 0.64 and 0.99 for experienced observers. CONCLUSION: Preoperative MR imaging is accurate for the prediction of absence of tumor invasion into pelvic structures. MR imaging may be useful as a preoperative road map for surgical procedure and may thus increase chances of complete resection. Interpretation of diffuse fibrosis remains difficult.

Kusters M

Origin of presacral local recurrence after rectal cancer treatment

Kusters M*, Wallner C, Lange MM, Deruiter MC, Velde CJ van de, Moriya Y, Rutten HJ*

Br J Surg. 2010 Oct;97(10):1582-8. Epub 2010 Jul 16

BACKGROUND:: The objective of this study was to obtain detailed anatomical information about the lateral lymph nodes, in order to determine whether they might play a role in presacral local recurrence of rectal cancer after total mesorectal excision without lateral lymph node dissection. METHODS:: Ten serially sectioned human fetal pelvises were studied at high magnification and a three-dimensional reconstruction of the fetal pelvis was made. RESULTS:: Examination of the histological sections and the three-dimensional reconstruction showed that lateral lymph node tissue comprises a major proportion of the pelvic tissue volume. There were no lymph nodes located in the presacral area. Connections between the mesorectal and extramesorectal lymph node system were found in all fetal pelvises, located below the peritoneal reflection on the anterolateral side of the fetal rectum. At this site middle rectal vessels passed to and from the mesorectum, and branches of the autonomic nervous system bridge to innervate the rectal wall. CONCLUSION:: The findings of this study support the hypothesis that tumour recurrence might arise from lateral lymph nodes.

Kusters M

Patterns of local recurrence in rectal cancer; a study of the Dutch TME trial

Kusters M*, Marijnen CA, Velde CJ van de, Rutten HJ*, Lahaye MJ, Kim JH, Beets-Tan RG, Beets GL

Eur J Surg Oncol. 2010 May;36(5):470-6. Epub 2010 Jan 21

AIM OF THE STUDY: In patients from the Dutch TME trial patterns of local recurrence (LR) in rectal cancer were studied. The purpose was to reconstruct the most likely mechanisms of LR and the effect of preoperative radiotherapy. METHODS: 1417 patients were analyzed; 713 were randomized into preoperative

radiotherapy and total mesorectal excision (RT + TME), 704 into TME alone. Of the 114 patients with LR, the subsites of LR were determined and related to tumor and treatment factors. RESULTS: Overall 5-year LR-rate was 4.6% in the RT + TME group and 11.0% in the TME group. Presacral local recurrences occurred most in both groups. Radiotherapy reduced anastomotic LR significantly, except when after low anterior resection (LAR) distal margins were less than 5 mm. Abdominoperineal resection (APR) mainly resulted in presacral LR. Even after resection with a negative circumferential resection margin, LR-rates were high. Thirty percent of the patients had advanced tumors, which resulted in 58% of all LRs. Lateral LR comprised 20% of all LR. Presacral and lateral LR resulted in a poor prognosis, in contrast to anterior or anastomotic LRs with a relatively good prognosis. CONCLUSIONS: RT reduces LR in all subsites and is especially effective in preventing anastomotic LR after LAR. APR-surgery mainly results in presacral LR, which may be prevented by a wider resection. In the TME trial many advanced tumors were included, rather requiring chemoradiotherapy instead of RT. Currently, with good imaging techniques, better selection can take place. Especially lateral LR might be a problem in the future.

Kusters M

Three-dimensional Analysis of Recurrence Patterns in Rectal Cancer: The Cranial Border in Hypofractionated Preoperative Radiotherapy Can Be Lowered

Nijkamp J, Kusters M*, Beets-Tan RG, Martijn H*, Beets GL, Velde CJ van de, Marijnen CA

Int J Radiat Oncol Biol Phys. 2010 Jun 18. [Epub ahead of print]

PURPOSE: The aim of this study was to determine whether and where the radiotherapy (RT) clinical target volume (CTV) could be reduced in short-course preoperative treatment of rectal cancer patients. METHODS AND MATERIALS: Patients treated in the Dutch total mesorectal excision trial, with a local recurrence were analyzed. For 94 (25 who underwent radiation therapy 69 who did not) of 114 patients with a local recurrence, the location of the recurrence was placed in a three-dimensionalthree (3D) model. The data in the 3D model were correlated to the clinical trial data to distinguish a group of patients eligible for CTV reduction. Effects of CTV reduction on dose to the small bowel was tested retrospectively in a dataset of 8 patients with three-field conformal plans and intensity-modulated RT (IMRT). RESULTS: The use of preoperative RT mainly reduces anastomotic, lateral, and perineal recurrences. In patients without primary nodal involvement, no recurrences were found cranially of the S2-S3 interspace, irrespective of the delivery of RT. In patients without primary nodal involvement and a negative circumferential resection margin (CRM), only one recurrence was found cranial to the S2-S3 interspace. With a cranially reduced CTV to the S2-S3 interspace, over 60% reduction in absolute small bowel exposure at dose levels from 15 to 35 Gy could be achieved with three-field conventional RT, increasing to 80% when IMRT is also added. CONCLUSIONS: The cranial border of the CTV can safely be lowered for patients without expected nodal or CRM involvement, yielding a significant reduction of dose to the small bowel.

Lauret GJ
[Effort thrombosis of the subclavian vein]
Yo LS*, Lauret GJ*, Tielbeek A*, Teijink J*
Ned Tijdschr Geneeskd. 2010;154(47):A2197
Voor abstract zie: Yo LS

Lauret GJ
Ginkgo biloba heeft geen toegevoegde waarde bij de behandeling van claudicatio intermittens
Lauret GJ*, Teijink JA*
Ned. Tijdsch. Geneesk. 2010;154:A2778

Lier L van
Risk-sensitive events during laparoscopic cholecystectomy: the influence of the integrated operating room and a preoperative checklist tool
Buzink SN*, Lier L van*, Hingh IH de*, Jakimowicz JJ*
Surg Endosc. 2010 Aug;24(8):1990-5. Epub 2010 Feb 5
Voor abstract zie: Buzink SN

Maaskant-Braat AJ
Sentinel node micrometastases in breast cancer do not affect prognosis: a population-based study
Maaskant-Braat AJ*, van de Poll-Franse LV, Voogd AC, Coebergh JW, Roumen RM, Nolthenius- Puylaert MC, Nieuwenhuijzen GA*
Breast Cancer Res Treat. 2010 Aug 3

Sentinel node biopsy (SNB) for axillary staging in breast cancer allows the application of more extensive pathologic examination techniques. Micrometastases are being detected more often, however, coinciding with stage migration. Besides assessing the prognostic relevance of micrometastases and the need for administering adjuvant systemic and regional therapies, there still seems to be room for improvement. In a population-based analysis, we compared survival of patients with sentinel node micrometastases with those with node-negative and node-positive disease in the era after introduction of SNB. Data from the population-based Eindhoven Cancer Registry were used on all (n = 6803) women who underwent SNB for invasive breast cancer in the Southeast Region of The Netherlands in the period 1996-2006. In 451 patients (6.6%) a sentinel node micrometastasis (pN1mi) was detected and in 126 patients (1.9%) isolated tumor cells (pN0(i+)). Micrometastases or isolated tumor cells in the SNB did not convey any significant survival difference compared with node-negative disease. After adjustment for age, pT, and grade, still no survival difference emerged pN1mi: [HR 0.9 (95% CI, 0.6-1.3)] and pN0(i+): [HR 0.4 (95% CI, 0.14-1.3)] and neither was the case after additional adjustment for adjuvant systemic therapy. Our practice-based study showed that the presence of sentinel node micrometastases in breast cancer patients has hardly any impact on breast cancer overall survival during the first years after diagnosis.

Maaskant-Braat AJ

Staging and management of axillary lymph nodes in patients with local recurrence in the breast or chest wall after a previous negative sentinel node procedure

Derkx F, Maaskant-Braat AJ*, Sangen MJ van der*, Nieuwenhuijzen GA*, Poll-Franse LV van de, Roumen RM, Voogd AC

Eur J Surg Oncol. 2010 Jul;36(7):646-51. Epub 2010 May 26

OBJECTIVE: To evaluate axillary staging and management in patients with local recurrence (LR) after a previous negative sentinel lymph node biopsy (SNB). METHODS: Between 1999 and 2008, 130 patients with previous negative SNB developed a LR of breast or chest wall. After examination of clinical records, 70 patients met the inclusion criteria and remained available for analysis. RESULTS: Thirty-seven patients were treated with axillary lymph node dissection (ALND), followed by axillary radiotherapy in 9 cases. In 26 of these 37 patients no positive axillary lymph nodes were found. Nineteen patients received no treatment of the axilla at all. Of those, 9 were older than 70 years of age at diagnosis of LR. In 13 patients a second SNB was attempted, but was successful in only 5 cases. Eight patients underwent a complementary ALND. Overall, positive lymph nodes were detected in 13 of the 50 patients who underwent axillary staging, either by SNB or ALND. The median length of follow-up of the 70 patients following their diagnosis of LR was 24 months (range 2-81 months). During this follow-up period one patient developed an axillary recurrence. This was a patient who refused to undergo ALND but was given locoregional radiotherapy instead. CONCLUSIONS: In the absence of guidelines for staging and management of the axilla at time of LR of breast or chest wall, many different strategies are being used. Considering the high rate of positive axillary lymph nodes in these patients, repeat surgical staging is appropriate.

Nicolaï SP

From the Cochrane library: Ginkgo biloba for intermittent claudication

Nicolaï SP*, Gerardu VC*, Kruidenier LM, Prins MH, Teijink JA*

Vasa. 2010 May;39(2):153-8

Background: Patients with intermittent claudication suffer from pain in the muscles of the legs during exercise that is relieved by a short rest. Ginkgo biloba extract is a vasoactive agent used for symptomatic relief in intermittent claudication. In this article a meta-analysis is discussed that assessed the effect of Ginkgo biloba on walking capacity in patients with intermittent claudication. Patients and methods: The Cochrane Peripheral Vascular Diseases Group searched their Trials Register and the Cochrane Central Register of Controlled Trials in The Cochrane Library. Furthermore MEDLINE/ PUBMED (until May 2008) and EMBASE (until May 2008) were searched and manufacturers of Ginkgo biloba extract were contacted. Randomized controlled trials of Ginkgo biloba extract versus placebo in people with intermittent claudication were included. Two authors independently assessed trials for selection, assessed study quality and extracted data. To standardize walking distance or time, caloric expenditures were used to correct for the different treadmill protocols. Results: Eleven trials involving 477 participants compared Ginkgo biloba with placebo and assessed the absolute claudication distance (maximal walking distance). At the end of the study the absolute claudication distance increased with

an overall effect size of 3.57 kilocalories (p = 0.06), for treatment with Ginkgo biloba, compared to placebo. This translates to an increase of 64.5 meters (confidence interval -1.8 to 130.7) on a flat treadmill with an average speed of 3.2 km/h. Conclusions: There is no evidence that Ginkgo biloba has a clinically significant benefit for patients with intermittent claudication.

Nienhuijs SW
Esophageal carcinoma after sleeve gastrectomy
Scheepers AF*, Schoon EJ*, Nienhuijs SW*
Surg Obes Relat Dis. 2010 Oct 30. [Epub ahead of print]

Nienhuijs SW
Evaluation of laparoscopic sleeve gastrectomy on weight loss and co-morbidity
Nienhuijs SW*, Zoete JP de*, Berende CA*, Hingh IH de*, Smulders JF*
Int J Surg. 2010;8(4):302-4. Epub 2010 Mar 19

BACKGROUND: The sleeve gastrectomy is a surgical technique to treat morbid obesity by both restrictive and probably hormonal action. Originally developed as a first stage to gastric bypass, it is more and more performed as a sole procedure. Therefore it is important to report results on weight loss and reduction in co-morbidity. METHODS: A consecutive series of 74 morbid obese patients were evaluated. Parameters were operative variables, complications, weight loss and the need for medication for co-morbidity at least six months postoperatively. RESULTS: Six procedures included the removal of a band and twice a vertical banded gastroplasty was performed previously. Median operating time diminished over time to 71 minutes. Three procedures were converted into open approach. Major complications were rhabdomyolysis (2), bleeding (2) and leakage (4). Four days was the mean hospital stay. The median follow-up was 12 months (range 6-33). The median percentage of excess weight loss was 49.6% (range 22-96 %EWL). The median loss in BMI points was 23.1% (range 9-50 %BMIL). Three quarters of the patients were able to diminish or stop their medication for diabetes, hypertension and hyperlipedemia. CONCLUSION: The laparoscopic gastric sleeve is effective in reduction of both weight and co-morbidity and has potential as a sole procedure. Patient's selection is, however, recommendable for initial surgical experience and longer follow-up will be necessary

Nienhuijs SW
Hyperthermic intraperitoneal chemotherapy added to the treatment of ovarian cancer. A review of achieved results and complications
Dovern E*, de Hingh IH*, Verwaal VJ, van Driel WJ, Nienhuijs SW*
Eur J Gynaecol Oncol. 2010;31(3):256-61
Voor abstract zie: Dovern E

Nienhuijs SW

Infrarenal abdominal aortic aneurysm with concomitant urologic malignancy: treatment results in the era of endovascular aneurysm repair

Habets J*, Buth J*, Cuypers PW*, Nienhuijs SW*, Hingh IH de*

Vascular. 2010; 18(1):14-9

Voor abstract zie: Nienhuijs SW

Nienhuijs SW

Pain after conventional versus Ligasure haemorrhoidectomy. A meta-analysis

Nienhuijs SW*, Hingh IH de*

Int J Surg. 2010;8(4):269-73, Epub 2010 Apr 11

BACKGROUND: Haemorrhoidectomy is a frequently performed surgical procedure and associated with postprocedural pain. The use of the Ligasure may result in a decreased incidence of pain as coagulation with high frequency current and active feedback control over the power output results in minimal thermal spread and limited tissue charring. METHODS: A multi-database systematic search was conducted to identify trials randomizing conventional and Ligasure haemorrhoidectomy. Key journals were hand searched. There was no restriction on language. Two reviewers independently extracted data and assessed trial quality. Odd Ratios were generated for dichotomous variables. Weight Mean Differences were used for analysing continuous variables. Only random effects models were used. Heterogeneity was explored by sensitivity analysis. RESULTS: Twelve studies with 1142 patients met the inclusion criteria. The pain score at the first day following surgery was significantly less in the Ligasure group (10 studies, 835 patients, WMD -2.07 CI -2.77 to -1.38). The benefit was diminished at day 14 (VAS pain score, 4 studies, 183 patients, WMD -0.12 CI -0.37 to 0.12). The conventional technique took significantly longer to complete (11 trials, 9.15minutes, CI 3.21 to 15.09). Significantly less urinary retentions and less delayed wound healing were noted following Ligasure haemorrhoidectomy. There was no relevant difference in other postoperative complications, symptoms of recurrent bleeding or incontinence at final follow-up. Hospital stay was similar for both groups. Patients treated with the Ligasure-technique returned to work significantly earlier (4 studies, 451 patients, 4.88 days, CI 2.18 to 7.59). Sensitivity analysis in case of considerable heterogeneity distinguished closed from open conventional technique. CONCLUSION: Since the usage of the Ligasure technique results in significantly less immediate postoperative pain after haemorrhoidectomy without any adverse effect on postoperative complications, convalescence and incontinence-rate, this technique is superior in terms of patient tolerance. Although there was a tendency for equal efficacy, more evaluation of the long-term risk of recurrent haemorrhoidal disease is required.

Nienhuijs SW

Reduction of in-hospital mortality following regionalisation of pancreatic surgery in the south-east of The Netherlands

Nienhuijs SW*, Rutten HJ*, Luiten EJ, Repelaer van Driel OJ, Reemst PH, Lemmens VE, Hingh IH de*

Eur J Surg Oncol. 2010 Jul;36(7):652-6. Epub 2010 May 26

BACKGROUND: In the late nineties of the former century, surgery for pancreatic and peri-ampullary cancer in the southern part of The Netherlands was performed mainly in low-volume hospitals (<5 resections/year). Results reported by the Comprehensive Cancer Center South (CCCS) in 2005 revealed the clearly disappointing results of this practice. The former stimulated the regionalisation of pancreatic surgery by 3 collaborating surgical units into one non-academic teaching hospital in the eastern part of the CCCS-region starting from July 2005. METHODS: All of the 76 patients in this regional cohort group in whom a resection of a (peri-)pancreatic tumour was performed with curative intent have been followed up prospectively. The results of surgical morbidity and in-hospital mortality were compared with the results of the CCCS cohort group which were reported previously. RESULTS: Ever since the regionalisation the annual number of patients undergoing resection of a pancreatic tumour increased from 10 to 33, resulting in a total number of 76 patients. Post-operative complications, reoperation rate and in-hospital mortality decreased significantly to 34.2%, 18.4% and 2.6% respectively, as compared to 71.9%, 37.8 and 24.4% in the time period before regionalisation ($p < 0.01$). CONCLUSION: These unique comparative prospective data derived from daily practice in a collaborative surgical region in The Netherlands (CCCS) support the need for centralisation of pancreatic surgery in order to improve standard of care in pancreatic surgery. This can be achieved by collaboration in a large regional hospital.

Nienhuijs SW

The Ladies trial: laparoscopic peritoneal lavage or resection for purulent peritonitis and Hartmann's procedure or resection with primary anastomosis for purulent or faecal peritonitis in perforated diverticulitis (NTR2037)

Swank HA, Vermeulen J, Lange JF, Mulder IM, van der Hoeven JA, Stassen LP, Crolla RM, Sosef MN, Nienhuijs SW*, Bosker RJ, Boom MJ, Kruyt PM, Swank DJ, Steup WH, de Graaf EJ, Weidema WF, Pierik RE, Prins HA, Stockmann HB, Tollenaar RA, van Wagensveld BA, Coene PP, Slooter GD, Consten EC, van Duyn EB, Gerhards MF, Hoofwijk AG, Karsten TM, Neijenhuis PA, Blanken-Peeters CF, Cense HA, Mannaerts GH, Bruin SC, Eijsbouts QA, Wiezer MJ, Hazebroek EJ, van Geloven AA, Maring JK, d'Hoore A, Kartheuser A, Remue C, van Grevenstein WM, Konsten JL, van der Peet DL, Govaert MJ, Engel AF, Reitsma JB, Bemelman WA, 3d TD

BMC Surg. 2010 Oct 18;10(1):29

BACKGROUND: Recently, excellent results are reported on laparoscopic lavage in patients with purulent perforated diverticulitis as an alternative for sigmoidectomy and ostomy. The objective of this study is to determine whether LaparOscopic LAvage and drainage is a safe and effective treatment for patients with purulent peritonitis (LOLA-arm) and to determine the optimal resectional strategy in patients with a purulent or faecal peritonitis (DIVA-arm: perforated DIVerticulitis with or without Anastomosis). DESIGN In this multicentre randomised trial all patients with perforated diverticulitis are included. Upon laparoscopy, patients with purulent peritonitis are treated with laparoscopic lavage and drainage, Hartmann's procedure or sigmoidectomy with primary anastomosis in a ratio of 2:1:1 (LOLAarm). Patients with faecal peritonitis will be randomised 1:1 between Hartmann's procedure and resection with primary anastomosis (DIVA-arm). The primary combined endpoint of the LOLA-arm is major morbidity and mortality. A sample size of 132:66:66 patients

will be able to detect a difference in the primary endpoint from 25% in resectional groups compared to 10% in the laparoscopic lavage group (two sided alpha = 5%, power = 90%). Endpoint of the DIVA-arm is stoma free survival one year after initial surgery. In this arm 212 patients are needed to significantly demonstrate a difference of 30% (log rank test two sided alpha = 5% and power = 90%) in favour of the patients with resection with primary anastomosis. Secondary endpoints for both arms are the number of days alive and outside the hospital, health related quality of life, health care utilisation and associated costs. DISCUSSION The Ladies trial is a nationwide multicentre randomised trial on perforated diverticulitis that will provide evidence on the merits of laparoscopic lavage and drainage for purulent generalised peritonitis and on the optimal resectional strategy for both purulent and faecal generalised peritonitis.

Nieuwenhuijzen GA
Sentinel node micrometastases in breast cancer do not affect prognosis: a population-based study
Maaskant-Braat AJ*, van de Poll-Franse LV, Voogd AC, Coebergh JW, Roumen RM, Nolthenius-Puylaert MC, Nieuwenhuijzen GA
Breast Cancer Res Treat. 2010 Aug 3 [Epub ahead of print]
Voor abstract zie: Nienhuijs SW

Nieuwenhuijzen GA
Absence of tumor invasion into pelvic structures in locally recurrent rectal cancer: prediction with preoperative MR imaging
Dresen RC, Kusters M*, Daniels-Gooszen AW*, Cappendijk VC, Nieuwenhuijzen GA*, Kessels AG, Bruïne AP de, Beets GL, Rutten HJ*, Beets-Tan RG
Radiology. 2010 Jul;256(1):143-50
Voor abstract zie: Kusters M

Nieuwenhuijzen GA
Are breast conservation and mastectomy equally effective in the treatment of young women with early breast cancer? Long-term results of a population-based cohort of 1,451 patients aged </=40 years
Sangen MJ van der *, van de Wiel FM, Poortmans PM, Tjan-Heijnen VC, Nieuwenhuijzen GA*, Roumen RM, Ernst MF, Tutein Nolthenius-Puylaert MC, Voogd AC
Breast Cancer Res Treat. 2010 Aug 12 [Epub ahead of print]
Voor abstract zie: Sangen MJ van der

Nieuwenhuijzen GA
Half of breast cancer patients discontinue tamoxifen and any endocrine treatment before the end of the recommended treatment period of 5 years: a population-based analysis
Herk-Sukel MP van, Poll-Franse LV van de, Voogd AC, Nieuwenhuijzen GA*, Coebergh JW, Herings RM
Breast Cancer Res Treat. 2010 Aug;122(3):843-51. Epub 2010 Jan 8
Observational studies on long-term endocrine treatment among breast cancer patients have presented discontinuation rates on tamoxifen, but lack information on

the continuance of any endocrine treatment [both tamoxifen and aromatase inhibitors (AIs)] within the same cohort. In this study we determined switching rates from tamoxifen to AIs, discontinuation rates of tamoxifen only, discontinuation rates of any endocrine treatment and determinants of first treatment switch and treatment discontinuation. Patients with early stage breast cancer (stage I-IIIa) starting on tamoxifen were selected from the linked Eindhoven Cancer Registry-PHARMO RLS cohort in the period 1998-2006. Continuous use (allowing a 60 days gap between refills) of tamoxifen only and any endocrine treatment were determined after various follow-up periods: 1, 2, 3, 4, and 5 years. Time to first switch from tamoxifen to an AI was assessed. Cox regression was used to identify determinants of first treatment switch, discontinuation of tamoxifen, and discontinuation of any endocrine treatment. A total of 1,451 new early stage breast cancer patients started on tamoxifen. Of those, 380 had a treatment switch to an AI during follow-up. Of the patients followed for 5 years, 40% continuously used tamoxifen, which was 49% for any endocrine treatment. Older age (older than 70 versus 50-69 years) was independently associated with increased discontinuation of tamoxifen and any endocrine therapy. Patients with two or more concomitant diseases (versus no comorbidity) showed an increased likelihood to stop any endocrine treatment or switch treatment from tamoxifen to an AI. In conclusion, up to half of the breast cancer patients starting tamoxifen continued 5 years of endocrine treatment. Identification of patients at risk of discontinuation will assist in the development of interventions to improve treatment continuation comparable to that of patients included in clinical trials.

Nieuwenhuijzen GA
Localization of non-palpable breast cancer using a radiolabelled titanium seed
Riet YE van*, Jansen FH*, Beek M van*, Velde CJ vd, Rutten HJ*, Nieuwenhuijzen GA*
Br J Surg. 2010;97(8):1240-245. Epub 2010 May 20
Voor abstract zie: Riet YE van

Nieuwenhuijzen GA
Neoadjuvant radiotherapy of primary irresectable unicentric Castleman's disease: a case report and review of the literature
Vries IA d., Acht MM v.*, Demeyere TB, Lybeert ML*, Zoete JP d.*, Nieuwenhuijzen GA*
Radiat Oncol. 2010;5(1):7

Nieuwenhuijzen GA
Staging and management of axillary lymph nodes in patients with local recurrence in the breast or chest wall after a previous negative sentinel node procedure
Derkx F, Maaskant-Braat AJ*, Sangen MJ van der*, Nieuwenhuijzen GA*, Poll-Franse LV van de, Roumen RM, Voogd AC
Eur J Surg Oncol. 2010 Jul;36(7):646-51. Epub 2010 May 26
Voor abstract zie: Maaskant-Braat AJ

Riet YE van

Localization of non-palpable breast cancer using a radiolabelled titanium seed

Riet YE van*, Jansen FH*, Beek M van*, Velde CJ vd, Rutten HJ*, Nieuwenhuijzen GA*

Br J Surg. 2010;97(8):1240-1245. Epub May 20

BACKGROUND:: Resection guided by a radiologically placed hookwire is the most common surgical technique for non-palpable breast cancer. This technique has several well described disadvantages such as incidental migration, kinking or fracture of the wire, and difficult logistics between the radiology, surgical and nuclear medicine departments. Use of an iodine-125-radiolabelled (I-125) seed for localization of non-palpable breast tumours could potentially prevent these problems. METHODS:: Data on use of the I-125 seed localization technique in 325 consecutive women were collected prospectively between October 2003 and June 2009. All patients with screen-detected, histologically proven malignancy were included. Patients with a preoperative core biopsy showing either ductal carcinoma in situ or unclear pathology were excluded from this study. RESULTS:: The mean(s.d.) age of the women was 59.5(11.9) years. Localization was guided ultrasonographically in 275 procedures, stereotactically in 45 and by both techniques in five. The I-125 seed was removed by surgery after a mean of 4(5) days. The mean duration of operation was 62.9(21.2) min. Complete tumour removal was achieved in 310 procedures (95.4 per cent). CONCLUSION:: Localization of impalpable breast cancer using a I-125 seed was safe and led to a high proportion of radical lumpectomies.

Rutten HJ

Absence of tumor invasion into pelvic structures in locally recurrent rectal cancer: prediction with preoperative MR imaging

Dresen RC, Kusters M*, Daniels-Gooszen AW*, Cappendijk VC, Nieuwenhuijzen GA*, Kessels AG, Bruïne AP de, Beets GL, Rutten HJ*, Beets-Tan RG

Radiology. 2010 Jul;256(1):143-50

Voor abstract zie: Kusters M

Rutten HJ

Gentamicin sponge for infection prophylaxis in colorectal surgery

de Bruin AF, Gosselink MP, Rutten HJ*

N Engl J Med. 2010 Dec 23;363(26):2566; author reply 2566-7

Rutten HJ

Improved survival of colon cancer due to improved treatment and detection: a nationwide population-based study in The Netherlands 1989-2006

Steenbergen LN van, Elferink MA, Krijnen P, Lemmens VE, Siesling S, Rutten HJ*, Richel DJ, Karim-Kos HE, Coebergh JW; on behalf of the Working Group Output of The Netherlands Cancer Registry

Ann Oncol. 2010 Nov;21(11):2206-12. Epub 2010 May 3

BACKGROUND: We described changes in treatment of colon cancer over time and the impact on survival in The Netherlands in the period 1989-2006. PATIENTS AND METHODS: All 103 744 patients with invasive colon cancer during 1989-2006 in The Netherlands were included. Data were extracted from The Netherlands Cancer Registry. Trends in treatment over time were analysed and multivariable relative

survival analysis was carried out. RESULTS: The administration of adjuvant chemotherapy in stage III patients <75 years increased from 19% in 1989-1993 to 79% in 2004-2006 and from 1% to 19% in stage III patients >/=75 years. Among stage IV patients, resection rates of the primary tumour decreased from 72% to 63%, while chemotherapy administration increased from 23% to 64% in those <75 years. Survival increased from 52% to 58% in males and from 55% to 58% among females. Stage III patients with adjuvant chemotherapy exhibited a relative excess risk of 0.4 (95% confidence interval 0.4-0.4) compared with those without. Among stage IV patients, resection of primary tumour, palliative chemotherapy, and metastasectomy were important prognostic factors. CONCLUSIONS: There were substantial improvements in management and survival of colon cancer from 1989 to 2006. Stage III disease patients with colon cancer experienced the largest improvement in survival, most likely related to the increased administration of adjuvant chemotherapy.

Rutten HJ

Intraoperative hyperthermic intraperitoneal chemotherapy after cytoreductive surgery for peritoneal carcinomatosis in an experimental model

Klaver YL*, Hendriks T, Lomme RM, Rutten HJ*, Bleichrodt RP, de Hingh IH*

Br J Surg. 2010 Dec;97(12):1874-80. Epub 2010 Aug 30

Voor abstract zie: Klaver YL

Rutten HJ

Large variation between hospitals and pathology laboratories in lymph node evaluation in colon cancer and its impact on survival, a nationwide population-based study in The Netherlands

Elferink MA, Siesling S, Visser O, Rutten HJ*, Krieken JH van, Tollenaar RA, Lemmens VE

Ann Oncol. 2011 Jan;22(1):110-7. Epub 2010 Jul 1

BACKGROUND: Adequate lymph node (LN) evaluation is important for planning treatment in patients with colon cancer. Aims of this study were to identify factors associated with adequate nodal examination and to determine its relationship with stage distribution and survival. PATIENTS AND METHODS: Data from patients with colon carcinoma stages I-III who underwent surgical treatment and diagnosed in the period 2000-2006 were retrieved from the Netherlands Cancer Registry. Multilevel logistic analysis was carried out to examine the influence of relevant factors on the number of evaluated LNs. The relationship with survival was analysed using Cox regression analysis. RESULTS: The number of examined LN was determined for 30 682 of 33 206 tumours. Median number of evaluated LN was 8, ranging from 4 to 15 between pathology laboratories. Females, younger patients, right-sided pN+ tumours with higher pT stage and patients diagnosed in an academic centre were less likely to have nine or less LN evaluated. Unexplained variation between hospitals and pathology laboratories remained, leading to differences in stage distribution. With increasing number of evaluated LN, the risk of death decreased. CONCLUSION: There was large diversity in nodal examination among patients with colon cancer, leading to differences in stage distribution and being associated with survival.

Rutten HJ

Local application of gentamicin collagen implants in the prophylaxis of surgical site infections following gastrointestinal surgery: a review of clinical experience

Bruin AF de, Gosselink MP, Harst E van der, Rutten HJ*

Tech Coloproctol. 2010 Dec;14(4):301-10. Epub 2010 Jun 29

BACKGROUND: Surgical site infection (SSI) is a common type of healthcare-associated infection in gastrointestinal (GI) surgical procedures, which often has major consequences for patient recovery and increased healthcare costs due to prolonged hospital stay. This article provides an overview of the efficacy and safety of prophylactic application of resorbable gentamicin-containing collagen implants (GCI) in the prevention of SSI following high-risk GI surgical procedures. METHOD: Nine publications were identified using the PubMed online database and search terms 'gentamicin collagen implant' plus 'surgical site infection', 'wound infection' and 'gastrointestinal surgery'. RESULTS: Data from 483 patients treated prophylactically have demonstrated that GCI can reduce the wound infection rate in high-risk GI surgical procedures and improve wound healing after pilonidal sinus excision. In a study of 221 patients who underwent colorectal surgery, the wound infection rate was reduced to 5.6% in the GCI group compared to 18.4% in the control group ($P < 0.01$). GCI also positively influences the postoperative course for patients undergoing particularly risky procedures e.g. abdominoperineal resection (APR) combined with neoadjuvant radiotherapy. In one such patient series, GCI reduced the wound infection rate by over 70% and the length of hospital stay by 40%. Few side effects of GCI were noted in the 9 clinical studies. CONCLUSIONS: This review demonstrates that GCI can have a positive effect on wound infection rates in high-risk GI surgery and can also improve wound healing after pilonidal sinus excision.

Rutten HJ

Localization of non-palpable breast cancer using a radiolabelled titanium seed

Riet YE van*, Jansen FH*, Beek M van*, Velde CJ vd, Rutten HJ*, Nieuwenhuijzen GA*

Br J Surg. 2010;97(8):1240-245. Epub 2010 May 20

Voor abstract zie: Riet YE van

Rutten HJ

Marked improvements in survival of patients with rectal cancer in the Netherlands following changes in therapy, 1989-2006

Elferink MA, Steenbergen LN van, Krijnen P, Lemmens VE, Rutten HJ*, Marijnen CA, Nagtegaal ID, Karim-Kos HE, Vries E de, Siesling S; On behalf of the Working Group Output of the Netherlands Cancer Registry

Eur J Cancer. 2010 May;46(8):1421-9. Epub 2010 Feb 19

BACKGROUND: Since the 1990s, treatment of patients with rectal cancer has changed in the Netherlands. Aim of this study was to describe these changes in treatment over time and to evaluate their effects on survival. METHODS: All patients in the Netherlands Cancer Registry with invasive primary rectal cancer diagnosed during the period 1989-2006 were selected. The Cochran-Armitage trend test was used to analyse trends in treatment over time. Multivariate relative survival analyses were performed to estimate relative excess risk (RER) of dying. RESULTS: In total,

40,888 patients were diagnosed with rectal cancer during the period 1989-2006. The proportion of patients with stages II and III disease receiving preoperative radiotherapy increased from 1% in the period 1989-1992 to 68% in the period 2004-2006 for younger patients (<75years) and from 1% to 51% for older patients (75years), whereas the use of postoperative radiotherapy decreased. Administration of chemotherapy to patients with stage IV disease increased over time from 21% to 66% for patients younger than 75years. Both males and females exhibited an increase in five-year relative survival from 53% to 60%. The highest increase in survival was found for patients with stage III disease. In the multivariate analyses survival improved over time for patients with stages II-IV disease. After adjustment for treatment variables, this improvement remained significant for patients with stages III and IV disease. CONCLUSIONS: The changes in therapy for rectal cancer have led to a markedly increased survival. Patients with stage III disease experienced the greatest improvement in survival.

Rutten HJ
Origin of presacral local recurrence after rectal cancer treatment
Kusters M*, Wallner C, Lange MM, Deruiter MC, Velde CJ van de, Moriya Y, Rutten HJ*
Br J Surg. 2010 Oct;97(10):1582-8. Epub 2010 Jul 16
Voor abstract zie: Kusters M

Rutten HJ
Patterns of local recurrence in rectal cancer; a study of the Dutch TME trial
Kusters M*, Marijnen CA, Velde CJ van de, Rutten HJ*, Lahaye MJ, Kim JH, Beets-Tan RG, Beets GL
Eur J Surg Oncol. 2010 May;36(5):470-6. Epub 2010 Jan 21
Voor abstract zie: Kusters M

Rutten HJ
Predictors and survival of synchronous peritoneal carcinomatosis of colorectal origin: A populationbased study
Lemmens VE, Klaver YL*, Verwaal VJ, Rutten HJ*, Coebergh JW, de Hingh IH*
Int J Cancer. 2010 Aug 16
Voor abstract zie: Klaver YL

Rutten HJ
Reduction of in-hospital mortality following regionalisation of pancreatic surgery in the south-east of The Netherlands
Nienhuijs SW*, Rutten HJ*, Luiten EJ, Repelaer van Driel OJ, Reemst PH, Lemmens VE, Hingh IH de*
Eur J Surg Oncol. 2010 Jul;36(7):652-6. Epub 2010 May 26
Voor abstract zie: Nienhuijs SW

Rutten HJ
The BRAF V600E mutation is an independent prognostic factor for survival in stage II and stage III colon cancer patients

Fariña-Sarasqueta A, Lijnschoten G van, Moerland E, Creemers GJ*, Lemmens VE, Rutten HJ*, Brule AJ van den*
Ann Oncol. 2010 Dec;21(12):2396-402. Epub 2010 May 25
Voor abstract zie: Creemers GJ

Rutten HJ
Trends in colorectal cancer in the south of the Netherlands 1975-2007: Rectal cancer survival levels with colon cancer survival
Lemmens V, Steenbergen LV, Janssen-Heijnen M, Martijn H*, Rutten H*, Coebergh JW
Acta Oncol. 2010 Aug;49(6):784-96. Epub 2010 Apr 29
Voor abstract zie: Martijn H

Rutten HJ
TS gene polymorphisms are not good markers of response to 5-FU therapy in stage III colon cancer patients
Fariña-Sarasqueta A, Gosens MJ, Moerland E, van Lijnschoten I, Lemmens VE, Slooter GD, Rutten HJ*, van den Brule AJ*
Anal Cell Pathol (Amst). 2010 Jan 1;33(1):1-11
Ook verschenen in: Cell Oncol. 2010 May 6. [Epub ahead of print]

Aim: Although the predictive and prognostic value of thymidylate synthase (TS) expression and gene polymorphism in colon cancer has been widely studied, the results are inconclusive probably because of methodological differences. With this study, we aimed to elucidate the role of TS gene polymorphisms genotyping in therapy response in stage III colon carcinoma patients treated with 5-FU adjuvant chemotherapy.Patients and methods: 251 patients diagnosed with stage III colon carcinoma treated with surgery followed by 5-FU based adjuvant therapy were selected. The variable number of tandem repeats (VNTR) and the single nucleotide polymorphism (SNP) in the 5'-untranslated region of the TS gene were genotyped.Results: There was a positive association between tumor T stage and the VNTR genotypes (p=0.05).In both univariate and multivariate survival analysis no effects of the studied polymorphisms on survival were found. However, there was an association between both polymorphisms and age. Among patients younger than 60 years, the patients homozygous for 2R seemed to have a better overall survival, whereas among the patients older than 67 this longer survival was seen by the carriers of other genotypes.Conclusion: We conclude that the TS VNTR and SNP do not predict response to 5-FU therapy in patients with stage III colon carcinoma. However, age appears to modify the effects of TS polymorphisms on survival.

Rutten HJ
Value of gene polymorphisms as markers of 5-FU therapy response in stage III colon carcinoma: a pilot study
Fariña-Sarasqueta A, Lijnschoten G van, Rutten HJ*, Brule AJ van den*
Cancer Chemother Pharmacol. 2010 Nov;66(6):1167-71. Epub 2010 Jul 28

PURPOSE: The role of pharmacogenetics in chemotherapy response in colon carcinoma is controversial. We studied the value of known SNPs in genes involved in 5-FU metabolism as biomarkers of chemotherapy response in patients with stage III colon carcinoma. METHODS: DNA was isolated from normal colonic tissue of 60

patients with stage III colon carcinoma treated adjuvantly with 5-FU combined with leucovorin. The tested SNPs were validated SNPs on the OPRT, TYMS and DPYD genes and a synonymous SNP on the TYMP gene. Real-time PCR, sequencing and RFLP were used for genotyping. RESULTS: None of the studied genotypes was associated with any of the tumor or patient characteristics. Moreover, none of the genotypes studied had effect on patient survival. CONCLUSION: In conclusion, the tested SNPs are not biomarkers of chemotherapy response in our stage III colon cancer patients group.

Rutten HJ

Variation in Lymph Node Evaluation in Rectal Cancer: A Dutch Nationwide Population-Based Study

Elferink MA, Siesling S, Lemmens VE, Visser O, Rutten HJ*, van Krieken JH, Tollenaar RA, Langendijk JA

Ann Surg Oncol. 2011 Feb;18(2):386-95. Epub 2010 Aug 24

BACKGROUND: For adequate staging and subsequent accurate estimation of prognosis, a sufficient number of lymph nodes (LNs) has to be evaluated. This study aimed to identify factors associated with adequate nodal evaluation and to determine its relationship with survival. METHODS: Data from all patients with stage I to III rectal carcinoma who underwent surgical treatment and who were diagnosed in the period 2000 to 2006 were retrieved from the Netherlands Cancer Registry. Multilevel logistic analysis was performed to examine the influence of relevant factors on the number of evaluated LNs. Kaplan-Meier and Cox regression analyses were used to analyze the association with overall survival. RESULTS: The number of evaluated LNs was determined for 10,788 (91%) of 11,818 tumors. Median number of evaluated LNs was 7, ranging from 4 to 11 between pathology laboratories. The proportion of patients with positive LNs increased with increasing number of evaluated LNs. Men, younger patients, tumors with deeper invasion and nodal involvement, patients without preoperative radiotherapy who underwent a low anterior resection, and patients whose LNs were evaluated in an academic pathology laboratory were more likely to have >/=12 LNs evaluated. After adding these factors to the model, unexplained variation between pathology laboratories and between hospitals remained. The overall survival increased with increasing number of evaluated LNs. CONCLUSIONS: A large variation in LN evaluation among patients with rectal cancer was revealed. Improvement in LN evaluation by both hospitals and pathology laboratories could improve staging, leading to more reliable estimation of prognosis.

Rutten HJ

Was There Shortening of the Interval Between Diagnosis and Treatment of Colorectal Cancer in Southern Netherlands Between 2005 and 2008?

Steenbergen LN van, Lemmens VE, Rutten HJ*, Martijn H,* Coebergh JW

World J Surg. 2010 May;34(5):1071-9

BACKGROUND: The Dutch Cancer Society proposed that the interval between diagnosis and start of treatment should be less than 15 working days. The purpose of this study was to determine whether the interval from diagnosis to treatment for patients with colorectal cancer (CRC) shortened between 2005 and 2008 in hospitals in southern Netherlands. METHODS: Patients with CRC diagnosed in six hospitals in

southern Netherlands during January to December in 2005 (n = 445) and January to July in 2008 (n = 353) were included. The time between diagnosis and start of treatment was assessed, and the proportion of patients treated within the recommended time (<15 working days) was calculated. RESULTS: The time to treatment for colon cancer patients was 13 working days in 2005 and 17 working days in 2008. For rectal cancer patients, the median time to preoperative radiotherapy was 28 working days in 2005 and 30 working days in 2008, and the median time to surgical treatment for rectal cancer patients was 26 working days in 2005 and 18 working days in 2008. Time to treatment did not shorten between 2005 and 2008 for colon and rectal cancer patients, except for rectal cancer patients who underwent surgery as initial treatment in patients aged >70 years and those with stage I disease. Substantial variation was seen among hospitals. CONCLUSIONS: Time to treatment for patients with CRC in southern Netherlands did not shorten between 2005 and 2008. The time to treatment should be reduced to meet the advice of the Dutch Cancer Society.

Sambeek MR van

Association Study of Single Nucleotide Polymorphisms on Chromosome 19q13 With Abdominal Aortic Aneurysm

Baas AF, Medic J, Slot R van 't, Vries JP de, Sambeek MR van*, Geelkerken BH, Boll BP, Grobbee DE, Wijmenga C, Ruigrok YM, Blankensteijn JD

Angiology. 2010;61:243-47

Background: Abdominal aortic aneurysm (AAA) is a complex disorder in which environmental and genetic factors play a role in pathogenesis. Linkage to 2 adjacent loci on 19q13 in familiar AAA was previously demonstrated. We studied whether genetic variation within these regions predisposes to AAA. Methods: Common genetic variants in the described regions on 19q13 were analyzed using tag single nucleotide polymorphisms (SNPs) in a Dutch case-control population. Single nucleotide polymorphism genotyping was performed in a 2-stage approach. Results: In stage 1, 615 SNPs were genotyped in 376 AAA patients and 648 controls. In stage 2, 8 SNPs of stage 1 with a P value < .015 were genotyped in a second independent cohort of 360 cases and 376 controls. No differences in allele frequencies were observed. Conclusion: Our findings suggest that there are no common AAA predisposing SNPs within the 19q13 loci. Hence, the genetic basis of familiar and sporadic AAA may differ.

Sambeek MR van

Carotid artery stenting versus surgery: adequate comparisons?

Roffi M, Sievert H, Gray WA, White CJ, Torsello G, Cao P, Reimers B, Mathias K, Setacci C, Schönholz C, Clair DG, Schillinger M, Grunwald I, Bosiers M, Abou-Chebl A, Moussa ID, Mudra H, Iyer SS, Scheinert D, Yadav JS, Sambeek MR v*, Holmes DR, Cremonesi A

Lancet Neurol. 2010;4:339-341

Sambeek MR van

Long-term outcome of open or endovascular repair of abdominal aortic aneurysm

Bruin JL de, Baas AF, Buth J*, Prinssen M, Verhoeven EL, Cuypers PW*, Sambeek MR van*, Balm R, Grobbee DE, Blankensteijn JD; DREAM Study Group

N Engl J Med. 2010 May 20;362(20):1881-9

Voor abstract zie: Buth J

Sambeek MR van

Predicting Patient-Specific Expansion of Abdominal Aortic Aneurysms

Helderman F, Manoch IJ, Breeuwer M, Kose U, Boersma H, Sambeek MR van*, Pattynama PM, Schouten O, Poldermans D, Wisselink W, Steen AF van der, Krams R

Eur J Vasc Endovasc Surg 2010;40:47-53

OBJECTIVE: Local anatomy and the patient's risk profile independently affect the expansion rate of an abdominal aortic aneurysm. We describe a hybrid method that combines finite element modelling and statistical methods to predict patient-specific aneurysm expansion. METHODS: The 3-D geometry of the aneurysm was imaged with computed tomography. We used finite element methods to calculate wall stress and aneurysm expansion. Expansion rate was adjusted by risk factors obtained from a database of 80 patients. Aneurysm diameters predicted with and without the risk profiles were compared with diameters measured with ultrasound for 11 patients. RESULTS: For this specific group of patients, local anatomy contributed 62% and the risk profile 38% to the aneurysmal expansion rate. Predictions with risk profiles resulted in smaller root mean square errors than predictions without risk profiles (2.9 vs. 4.0 mm, $p < 0.01$). CONCLUSIONS: This hybrid approach predicted aneurysmal expansion for a period of 30 months with high accuracy.

Sambeek MR van

Response to comments on: "The Influence of Wall Stress on AAA Growth and Biomarkers"

Speelman L, Hellenthal FA, Pulinx B, Bosboom EM, Breeuwer M, Sambeek MR van*, Vosse FN van de, Jacobs MJ, Wodzig WK, Schurink GW vb

Eur J Vasc Endovasc Surg. 2010 Apr 15 [Epub ahead of print]

Sambeek MR van

Systematic review and meta-analysis of sex differences in outcome after intervention for abdominal aortic aneurysm.

Grootenboer N*, Sambeek MR van*, Arends LR, Hendriks JM, Hunink MG, Bosch JL

Br J Surg 2010;78:1168-79. Epub 2010 Jun 16

Voor abstract zie: Grootenboer N

Sambeek MR van

The Influence of Wall Stress on AAA Growth and Biomarkers

Speelman L, Hellenthal FA, Pulinx B, Bosboom EM, Breeuwer M, Sambeek MR van*, Vosse FN van de, Jacobs MJ, Wodzig WK, Schurink GW

Endovasc Surg 2010;39:410-16

OBJECTIVES: This study investigated the relation between abdominal aortic aneurysm (AAA) wall stress, AAA growth rate and biomarker concentrations. With increasing wall stress, more damage may be caused to the AAA wall, possibly leading to progression of the aneurysm and reflection in up- or downregulation of specific circulating biomarkers. Levels of matrix metalloproteinase-9, tissue inhibitor of matrix metalloproteinase-1, C-reactive protein and alpha 1-antitrypsin were therefore evaluated. METHODS: Thirty-seven patients (maximum AAA diameter 41-55mm) with two, three or four consecutive computed tomography angiography (CTA) scans were prospectively included. Diameter growth rate in mm/year was determined between each pair of two sequential CTA scans. AAA wall stress was computed by finite element analysis, based on the first of the two sequential CTA scans only (n=69 pairs). Biomarker information was determined in 46 measurements in 18 patients. The relation between AAA diameter and wall stress was determined and the AAA's were divided into three equally sized groups (relative low, medium and high stress). Growth rate and biomarker concentrations were compared between these groups. Additionally, correlation coefficients were computed between absolute wall stress, AAA growth and biomarker concentrations. RESULTS: A relative low AAA wall stress was associated with a lower aneurysm growth rate. Growth rate was also positively related to MMP-9 plasma concentration (r=0.32). The average MMP-9 and CRP concentrations increased with increasing degrees of relative wall stress, although the absolute and relative wall stress did not correlate with any of the biomarkers. CONCLUSION: Although lower relative wall stress was associated to a lower AAA growth rate, no relation was found between biomarker concentrations and wall stress. Future research may focus on more and extensive biomarker measurements in relation to AAA wall stress.

Sambeek MR van

The Intracranial Aneurysm Susceptibility Genes HSPG2 and CSPG2 Are Not Associated With Abdominal Aortic Aneurysm

Baas AF, Medic J, Slot R van 't, Vries JP de, Sambeek MR van*, Verhoeven EL, Boll BP, Grobbee DE, Wijmenga C, Blankensteijn JD, Ruigrok YM

Angiology 2010;61:238-42

Background: A genetic variant on chromosome 9p21 associates with abdominal aortic aneurysm (AAA) and intracranial aneurysm (IA), indicating that despite the differences in pathology there are shared genetic risk factors. We investigated whether the IA susceptibility genes heparan sulfate proteoglycan 2 (HSPG2) and chondroitin sulfate proteoglycan 2 (CSPG2) associate with AAA as well. Methods: Using tag single nucleotide polymorphisms (SNPs), all common variants were analyzed in a Dutch AAA casecontrol population in a 2-stage genotyping approach. In stage 1, 12 tag SNPs in HSPG2 and 22 tag SNPs in CSPG2 were genotyped in 376 patients and 648 controls. Genotyping of significantly associated SNPs was replicated in a second independent cohort of 360 cases and 376 controls. Results: In stage 1, no HSPG2 SNPs and 1 CSPG2 SNP associated with AAA (rs2652106, P = .019). Association of this SNP was not replicated (P = .342). Conclusions: Our findings demonstrate that, in contrast to IA, HSPG2 and CSPG2 do not associate with AAA.

Scheepers AF
Esophageal carcinoma after sleeve gastrectomy
Scheepers AF*, Schoon EJ*, Nienhuijs SW*
Surg Obes Relat Dis. 2010 Oct 30. [Epub ahead of print]

Smulders JF
Evaluation of laparoscopic sleeve gastrectomy on weight loss and co-morbidity
Nienhuijs SW*, Zoete JP de*, Berende CA*, Hingh IH de*, Smulders JF*
Int J Surg. 2010;8(4):302-4. Epub 2010 Mar 19
Voor abstract zie: Nienhuijs SW

Teijink JA
Contrast-enhanced Ultrasound versus Computed Tomographic Angiography for Surveillance of Endovascular Abdominal Aortic Aneurysm Repair
Bosch JA ten, Rouwet EV, Peters CT, Jansen L, Verhagen HJ, Prins MH, Teijink JA*
J Vasc Interv Radiol. 2010 May;21(5):638-43. Epub 2010 Apr 2

PURPOSE: To compare diagnostic accuracy between contrast-enhanced ultrasound (US) and computed tomographic (CT) angiography to detect changes in abdominal aortic aneurysm (AAA) size and endoleaks during follow-up after endovascular aneurysm repair (EVAR). MATERIALS AND METHODS: Between May 2006 and December 2008, 83 patients were consecutively enrolled for contrast-enhanced US and CT angiography imaging during surveillance after EVAR, yielding 127 paired examinations. Comparative analysis was performed for the anteroposterior and transverse maximal diameters of the aneurysm sac and for the presence or absence of endoleak, as determined by US and CT angiography. RESULTS: Contrast-enhanced US demonstrated significantly more endoleaks, predominantly of type II, compared with CT angiography (53% vs 22% of cases). The number of observed agreements was 77 of 127 (61%), indicating a low level of agreement (kappa value of 0.237). US was as accurate as CT angiography in the assessment of maximal aneurysm sac diameters, as shown by Bland-Altman analyses and low coefficients of variation (8.0% and 8.6%, respectively). The interobserver variability for AAA size measurement by US was low, given the interclass correlation coefficients of 0.99 and 0.98 for anteroposterior and transverse maximal diameters, respectively. CONCLUSIONS: Contrast-enhanced US may be an alternative to CT angiography in the follow-up of patients after EVAR. As US reduces exposure to the biologic hazards associated with lifelong annual CT angiography, including cumulative radiation dose and nephrotoxic contrast agent load, contrast-enhanced US might be considered as a substitute for CT angiography in the surveillance of patients after EVAR.

Teijink JA
Cost-effectiveness of Exercise Therapy in Patients with Intermittent Claudication: Supervised Exercise Therapy versus a 'Go Home and Walk' Advice
van Asselt AD, Nicolaï SP, Joore MA, Prins MH, Teijink JA*; on behalf of the Exercise Therapy in Peripheral Arterial Disease (EXITPAD) study Group
Eur J Vasc Endovasc Surg. 2011 Jan;41(1):97-103. Epub 2010 Dec 14

OBJECTIVES: The Exercise Therapy in Peripheral Arterial Disease (EXITPAD) study has shown supervised exercise therapy (SET) to be more effective regarding walking distance and quality of life than a 'go home and walk' advice (WA) for patients with intermittent claudication. The present study aims to assess the cost-effectiveness of SET versus WA. PATIENTS AND METHODS: Data from the EXITPAD study, a 12-month randomised controlled trial in 304 patients with claudication, was used to study the proportion of costs to walking distance and quality of life. Two different incremental cost-effectiveness ratios (ICERs) were calculated for SET versus WA: costs per extra metre on the treadmill test, and costs per quality-adjusted life year (QALY). QALYs were based on utilities derived from the EuroQoL-5 dimensions (EQ-5D). RESULTS: Mean total costs were higher for SET than for WA (3407 versus 2304 Euros), mainly caused by the costs of exercise therapy. The median walking distance was 620 m for SET and 400 m for WA. QALYs were 0.71 for SET and 0.67 for WA. All differences were statistically significant. The ICER for cost per extra metre on the 12-month treadmill test was € 4.08. For cost per QALY, the ICER was € 28693. CONCLUSION: At a willingness-to-pay threshold of € 40 000 per QALY, SET likely is a cost-effective therapeutic option for patients with claudication.

Teijink JA
[Effort thrombosis of the subclavian vein]
Yo LS*, Lauret GJ*, Tielbeek A*, Teijink JA*
Ned Tijdschr Geneeskd. 2010;154(47):A2197
Voor abstract zie: Yo LS

Teijink JA
Endovascular aneurysm repair is superior to open surgery for ruptured abdominal aortic aneurysms in EVAR-suitable patients
Bosch JA ten, Teijink JA*, Willigendael EM, Prins MH
J Vasc Surg. 2010 Jul;52(1):13-8. Epub 2010 May 14

OBJECTIVE: Efficacy results of endovascular repair (rEVAR) for ruptured abdominal aortic aneurysm (rAAA) compared with open surgery are based on several observational studies containing selection bias. The present study compared rEVAR with open surgery in EVAR-suitable patients with an rAAA who all underwent the same preoperative imaging protocol. METHODS: Our policy is to perform a computed tomography angiography on all patients with a suspected rAAA. rEVAR was performed when the rEVAR-vascular surgeon was on call and the patient was suitable for EVAR. Afterwards, two experienced independent blinded experts assessed all computed tomography angiography (CTA) scans on EVAR-suitability. Only EVAR-suitable patients were included in the main analyses. Outcome parameters included mortality (intraoperative, 30-day, and 6-month), complications, reinterventions, and length of hospital stay. RESULTS: From April 2002 until March 2008, 132 consecutive patients with suspected rAAAs were presented. Preoperative CTA confirmed rAAA in 104 patients, of whom 25 underwent rEVAR, and 79 underwent open surgery. In retrospect, the 25 rEVAR patients and 33 patients in the open group were judged EVAR-suitable by the experts. At baseline, there was an equal distribution of physiologic and anatomic characteristics as well as comorbidity. In EVAR-suitable patients, the intraoperative, 30-day, and 6-month mortality was

4.0% (1 of 25), 20.0% (5 of 25), and 28.0% (7 of 25) after rEVAR compared with 6.1% (2 of 33; P >.99), 45.5% (15 of 33; P = .04), and 54.5% (18 of 33; P = .04) after open surgery, respectively. Median length of hospital stay was 9.5 days (interquartile range, 5.0-20.5) after rEVAR and 17.0 days (interquartile range, 9.5-28.0) after open surgery (P = .03). CONCLUSIONS: In EVAR-suitable patients, an absolute perioperative mortality reduction of 25.5% of rEVAR over open surgery was found, which was still present at 6 months of followup. These data suggest that rEVAR is a superior treatment option for EVAR-suitable patients with an rAAA compared with an open surgery.

Teijink JA

Extending the Range of Treadmill Testing For Patients with Intermittent Claudication

Nicolaï SP, Leffers P, Kruidenier LM, Bie RA de , Prins MH, Teijink JA*

Med Sci Sports Exerc. 2010 Apr;42(4):640-5

PURPOSE:: There is a need to evaluate patients with peripheral arterial disease (PAD) with a limited or extended walking distance. We aimed to enable an estimation of walking distance as measured on a frequently used 'standard' graded (3.2 km/h, 2% increase per 2 minutes) protocol, for walking distances measured on protocols with a lower or higher workload. METHODS:: Patients with PAD and an absolute claudication distance (ACD) of < 500 or between 1000 and 1600 meters as measured with the 'standard' protocol were included. Four graded study treadmill protocols, 2 with lower and 2 with higher workload than the 'standard' protocol were developed. Two study protocols (low or high) and the 'standard' protocol were repeated in random order. Quality was determined with the intraclass correlation coefficient (ICC) and the coefficient of variation (COV). Orthogonal regression analysis was used to predict walking distances on the standard protocol based on the study protocols. RESULTS:: Forty three patients with an ACD < 500 meters and 23 patients with an ACD between 1000 and 1600 meters were included. Since feasibility from the protocols with 2.0 km/h and 2% increase every 2 minutes and 4.4 km/h and 2% increase every minute was highest, they were calibrated against the 'standard' protocol and reliability was comparable with the 'standard' protocol. The COVs between the prediction of walking distance on the 'standard' protocol based on the new protocols and the measured distances were in the same range (22-25%) as the variation measured performing the same treadmill test twice. CONCLUSION:: An accurate estimate of walking distance as measured on a 'standard' treadmil protocol can be derived from a protocol with a lower or higher workload.

Teijink JA

Ginkgo biloba heeft geen toegevoegde waarde bij de behandeling van claudicatio intermittens

Lauret GJ, Teijink JA

Ned. Tijdsch. Geneesk. 2010;154:A2778

Teijink JA

Long-term outcome of open or endovascular repair of abdominal aortic aneurysm

Bruin JL de, Baas AF, Buth J*, Prinssen M, Verhoeven EL, Cuypers PW*, Sambeek MR van*, Balm R, Grobbee DE, Blankensteijn JD; DREAM Study Group

N Engl J Med. 2010 May 20;362(20):1881-9

Voor abstract zie: Buth J

Teijink JA

Multicenter randomized clinical trial of supervised exercise therapy with or without feedback versus walking advice for intermittent claudication

Nicolaï SP, Teijink JA*, Prins MH; Exercise Therapy in Peripheral Arterial Disease (EXITPAD) study group

J Vasc Surg. 2010 Aug;52(2):348-55. Epub 2010 May 15

OBJECTIVE: The initial treatment for intermittent claudication is supervised exercise therapy (SET). Owing to limited capacity and patient transports costs of clinic-based SET, a concept of SET provided by local physiotherapists was developed. We hypothesized that provision of daily feedback with an accelerometer in addition to SET would further increase walking distance. METHODS: This multicenter randomized trial was set in vascular surgery outpatient clinics and included 304 patients with intermittent claudication. Patients were randomized to exercise therapy in the form of "go home and walk" advice (WA), SET, or SET with feedback. Local physiotherapists provided SET. The primary outcome measure was the change in absolute claudication distance. Secondary outcomes were the change in functional claudication distance and results on the Walking Impairment Questionnaire (WIQ) and Short-Form 36 (SF-36) Health Survey after 12 months. RESULTS: In 11 centers, 102, 109, and 93 patients were included, respectively, in the WA, SET, and SET with feedback groups, and data for 83, 93, and 76, respectively, could be analyzed. The median (interquartile range) change in walking distance between 12 months and baseline in meters was 110 (0-300) in the WA group, 310 (145-995) in the SET group, and 360 (173-697) in the SET with feedback group ($P < .001$ WA vs SET). WIQ scores and relevant domains of the SF-36 improved statistically significantly in the SET groups. CONCLUSIONS: SET is more effective than WA in improving walking distance, WIQ scores, and quality of life for patients with intermittent claudication. Additional feedback with an accelerometer did not result in further improvement. SET programs should be made available for all patients with intermittent claudication.

Teijink JA

No benefit of compression stocking after regular inversion stripping in varices: a randomised controlled trial

Houtermans-Auckel JP, Rossum E van, Teijink JA*, Dahlmans AA, Eussen EF, Krasznai A, Nicolaï SP, Welten RJ

Ned Tijdschr Geneeskd. 2010;154(13):A1448

OBJECTIVE: To assess the need to wear a compression stocking after regular inversion stripping of the great saphenous vein (GSV) from groin to the level of the knee. DESIGN: Randomised controlled trial. METHOD: 104 consecutive patients with primary complete incompetence of the GSV listed for regular inversion stripping of

the GSV were randomised by computer to wear a compression stocking (intervention group) or no compression stocking (control group) for 4 weeks. The primary endpoint was leg oedema as assessed by leg volume. Secondary endpoints were pain, postoperative complications, and return to work. RESULTS: Leg volume decreased in the control group (n = 52) from 3657 ml (SD: 687) to 3640 ml (SD: 540) 4 weeks postoperatively (non-significant, p = 0.82). In the intervention group the volume decreased from 3629 ml (SD: 540) to 3534 ml (SD: 543; p < 0.01). On average, patients in the control group resumed work 3.9 days earlier (p = 0.02). The difference in leg volume between both groups was not significant (p = 0.18). No differences were observed in the number and type of postoperative complications (p = 0.26), and pain scores (p = 0.51). CONCLUSION: An elastic compression stocking has no additional benefit in postoperative care after inversion stripping of the great saphenous vein with respect to oedema control, pain, complications, and resumption of work.

Teijink JA

Optimizing supervised exercise therapy for patients with intermittent claudication

Nicolaï SP, Hendriks EJ, Prins MH, Teijink JA*; EXITPAD study group

J Vasc Surg. 2010 Nov;52(5):1226-33, Epub 2010 Aug 7

BACKGROUND: The first-line intervention for intermittent claudication is usually supervised exercise therapy (SET). The literature describes a range of exercise programs varying in setting, duration, and content. The purpose of the present study was to examine the exercise protocols offered and to identify the impact of the intensity of the SET programs (in terms of frequency, duration, and type of exercise) on improvements in walking distance (response) in the first 3 months. The present study is part of the Exercise Therapy in Peripheral Arterial Disease (EXITPAD) study, a multicenter randomized clinical trial comparing the effects of SET provided by regional physiotherapists, with or without daily feedback, on the level of activities with the effects of walking advice. METHODS: The analysis included patients randomized to receive SET with or without feedback. The physical therapists administering the SET were asked to fill out therapy evaluation sheets stating frequency, duration, and type of exercises. The relationship between training volume and the impact on walking distance was explored by dividing training volume data into tertiles and relating them to the median change in maximum walking distance at 3 and 12 months. RESULTS: Data of 169 patients were included in the analysis. A SET program consisting of at least two training sessions per week each lasting over 30 minutes, during the first 3 months of a 1-year program tailored to individual patients' needs led to better results in terms of walking distance after 3 and 12 months than the other variants. The results of our analysis dividing training volume into tertiles suggest that there is a relationship between training volume and improvement in walking distance and that at least 590 minutes of training should be offered in the first 3 months. No differences were found between program involving only walking and a combination of exercises, nor between individual and group training. CONCLUSION: A SET programs consisting of at least two training sessions a week, each lasting over 30 minutes, should be offered during the first 3 months of the SET program to optimize improvement in terms of maximum walking distance.

Teijink JA

Predicting mortality in damage control surgery for major abdominal trauma

Timmermans J, Nicol A, Kairinos N, Teijink J*, Prins M, Navsaria P

S Afr J Surg. 2010 Feb;48(1):6-9

BACKGROUND: Damage control surgery (DCS) has become well established in the past decade as the surgical strategy to be employed in the unstable trauma patient. The aim of this study was to determine which factors played a predictive role in determining mortality in patients undergoing a damage control laparotomy. MATERIALS AND METHODS: A retrospective review of all patients undergoing a laparotomy and DCS in a level 1 trauma centre over a 3-year period was performed. Twenty-nine potentially predictive variables for mortality were analysed. RESULTS: Of a total of 1 274 patients undergoing a laparotomy for trauma, 74 (6%) required a damage control procedure. The mean age was 28 years (range 14 - 53 years). The mechanism of injury was gunshot wounds in 57 cases (77%), blunt trauma in 14 (19%) and stabs in 3 (4%). Twenty patients died, giving an overall mortality rate of 27%. Factors significantly associated with increased mortality were increasing age ($p=0.001$), low base excess ($p=0.002$), pH ($p<0.001$), core temperature ($p=0.002$), and high blood transfusion requirement over 24 hours ($p=0.002$). CONCLUSION: The overall survival of patients after damage control procedures for abdominal trauma was excellent (73%). The main factors that are useful in deciding when to initiate DCS are age, base excess, pH and the core temperature.

Teijink JA

Rationale and design of the Endurant Stent Graft Natural Selection Global Postmarket Registry (ENGAGE): interim analysis at 30 days of the first 180 patients enrolled

Böckler D, Fitridge R, Wolf Y, Hayes P, Silveira PG, Numan F, Riambau V; ENGAGE Investigators

J Cardiovasc Surg (Torino). 2010 Aug;51(4):481-91

AIM: The Endurant Stent Graft Natural Selection Global Postmarket Registry (ENGAGE) is a long-term 1200-patient multicenter prospective study initiated to augment the knowledge base (poolable and comparable) about endovascular aortic repair (EVAR) in a real-world population implanted with a single latest-generation stent graft system (Endurant). With enrollment ongoing at 80 high-volume sites, the registry has limited inclusion/exclusion criteria or procedural specification. Technical and clinical data will be reported through 5 years. METHODS: An interim analysis was performed on investigator-reported data for the first 180 patients enrolled. These patients were asymptomatic elderly males (92.1%) with considerable comorbidities. For 47.3% of the patients, the American Society of Anesthesiologists risk class was either III or IV. The Endurant stent graft was successfully deployed in 99.4% of patients for elective treatment of abdominal aortic aneurysm. RESULTS: Through 30 days, the rate of all-cause mortality was 1.7% (N=3), with all 3 deaths classified as procedure-related but not device-related. The rate of secondary endovascular procedures was 1.1%, and the rate of conversion to open repair was 0.6%. At postprocedure and at 30-day follow-up, there were no type I or type III endoleaks and no instances of stent graft kinking, thrombosis, or occlusion. ENGAGE represents the largest real-world registry for any single EVAR stent graft. CONCLUSION: The

interim results through 30 days of the first 180 patients enrolled are promising. Longer-term follow-up for more patients will be reported

Teijink JA
From the Cochrane library: Ginkgo biloba for intermittent claudication
Nicolaï SP*, Gerardu VC*, Kruidenier LM, Prins MH, Teijink JA*
Vasa. 2010 May;39(2):153-8
Voor abstract zie: Nicolaï SP

Verhofstad N,
Benzo(a)pyrene induces similar gene expression changes in testis of DNA repair proficient and deficient mice
Verhofstad N*, Pennings JL, van Oostrom CT, van Benthem J, van Schooten FJ, van Steeg H, Godschalk RW
BMC Genomics. 2010 May 26;11:333

BACKGROUND: Benzo [a]pyrene (B[a]P) exposure induces DNA adducts at all stages of spermatogenesis and in testis, and removal of these lesions is less efficient in nucleotide excision repair deficient Xpc-/- mice than in wild type mice. In this study, we investigated by using microarray technology whether compromised DNA repair in Xpc-/- mice may lead to a transcriptional reaction of the testis to cope with increased levels of B[a]P induced DNA damage. RESULTS: Two-Way ANOVA revealed only 4 genes differentially expressed between wild type and Xpc-/- mice, and 984 genes between testes of B[a]P treated and untreated mice irrespective of the mouse genotype. However, the level in which these B[a]P regulated genes are expressed differs between Wt and Xpc-/- mice ($p = 0.000000141$), and were predominantly involved in the regulation of cell cycle, translation, chromatin structure and spermatogenesis, indicating a general stress response. In addition, analysis of cell cycle phase dependent gene expression revealed that expression of genes involved in G1-S and G2-M phase arrest was increased after B[a]P exposure in both genotypes. A slightly higher induction of average gene expression was observed at the G2-M checkpoint in Xpc-/-mice, but this did not reach statistical significance ($P = 0.086$). Other processes that were expected to have changed by exposure, like apoptosis and DNA repair, were not found to be modulated at the level of gene expression. CONCLUSION: Gene expression in testis of untreated Xpc-/- and wild type mice were very similar, with only 4 genes differentially expressed. Exposure to benzo(a)pyrene affected the expression of genes that are involved in cell cycle regulation in both genotypes, indicating that the presence of unrepaired DNA damage in testis blocks cell proliferation to protect DNA integrity in both DNA repair proficient and deficient animals.

Verhofstad N
DNA adduct kinetics in reproductive tissues of DNA repair proficient and deficient male mice after oral exposure to benzo(a)pyrene
Verhofstad N*, van Oostrom CT, van Benthem J, van Schooten FJ, van Steeg H, Godschalk RW
Environ Mol Mutagen. 2010 Mar;51(2):123-9

Benzo(a)pyrene (B[a]P) can induce somatic mutations, whereas its potential to induce germ cell mutations is unclear. There is circumstantial evidence that paternal exposure to B[a]P can result in germ cell mutations. Since DNA adducts are thought to be a prerequisite for B[a]P induced mutations, we studied DNA adduct kinetics by (32)P-postlabeling in sperm, testes and lung tissues of male mice after a single exposure to B[a]P (13 mg/kg bw, by gavage). To investigate DNA adduct formation at different stages of spermatogenesis, mice were sacrificed at Day 1, 4, 7, 10, 14, 21, 32, and 42 after exposure. In addition, DNA repair deficient (Xpc(-/-)) mice were used to study the contribution of nucleotide excision repair in DNA damage removal. DNA adducts were detectable with highest levels in lung followed by sperm and testis. Maximum adduct levels in the lung and testis were observed at Day 1 after exposure, while adduct levels in sperm reached maximum levels at approximately 1 week after exposure. Lung tissue and testis of Xpc(-/-) mice contained significantly higher DNA adduct levels compared to wild type (Wt) mice over the entire 42 day observation period ($P < 0.05$). Differences in adduct half-life between Xpc(-/-) and Wt mice were only observed in testis. In sperm, DNA adduct levels were significantly higher in Xpc(-/-) mice than in Wt mice only at Day 42 after exposure ($P = 0.01$). These results indicate that spermatogonia and testes are susceptible for the induction of DNA damage and rely on nucleotide excision repair for maintaining their genetic integrity.

Verhofstad N

Evaluation of benzo(a)pyrene-induced gene mutations in male germ cells.

Verhofstad N*, van Oostrom CT, Zwart E, Maas LM, van Benthem J, van Schooten FJ, van Steeg H, Godschalk RW

Toxicol Sci. 2011 Jan;119(1):218-23. Epub 2010 Oct 20

Polycyclic aromatic hydrocarbons (PAHs) are mutagenic in somatic cells, whereas it remains unclear whether PAHs induce mutations in male germ cells, subsequently increasing health risks in offspring. Although results from the classical specific locus test are negative or inconclusive, recent studies with environmentally exposed animals suggest that PAHs are mutagenic in sperm cells. Therefore, we studied whether benzo(a)pyrene (B[a]P) was able to induce gene mutations in testis and sperm cells of wild-type (Wt) and Xpc(-/-) mice containing the pUR288 lacZ reporter gene. Mice were exposed to B[a]P (13 mg/kg body weight, three times per week) during 1, 4, or 6 weeks and sacrificed 6 weeks after the final exposure to obtain mutations in sperm derived from B[a]P-exposed spermatogonial stem cells. The lacZ gene mutation assay was used to assess mutant frequencies in spleen, testis, and mature sperm, and (32)P-postlabeling was used for the detection of DNA adducts in testis. Successful exposure was confirmed by a dose-related higher mutant frequency in spleen of Xpc(-/-) mice as compared with Wt mice. Mutant frequencies were also increased in all ethyl nitrosourea-exposed samples, which were used as positive control. Although B[a]P-related DNA adducts were detected in testis, mutant frequencies were not increased. On the other hand, B[a]P increased mutant frequencies in sperm of Wt mice, but not in Xpc(-/-) mice, after 6 weeks exposure. Therefore, we conclude that B[a]P can induce gene mutations in spermatogonial cells of mice, but it remains to be elucidated whether these mutations can be transmitted to offspring.

Vries IA de

Neoadjuvant radiotherapy of primary irresectable unicentric Castleman's disease: a case report and review of the literature

Vries IA d.*, Acht MM v*, Demeyere TB, Lybeert ML*, Zoete JP d.*, Nieuwenhuijzen GA*
Radiat Oncol. 2010;5(1):7

BACKGROUND: Castleman disease (CD) is a rare benign disorder characterized by hyperplasia of lymphoid tissue that may develop at a single site or throughout the body. The etiology of this disorder is unclear, although the histopathological presentation can be differentiated into a hyaline vascular variant, a plasma cell variant and a mixed variant. Clinically, it has been recorded that 3 manifestations of CD are characterized: a localized unicentric type, a generalized multicentric type and a mixed form. Surgery remains the main treatment for resectable unicentric CD, since removal of the large node is possible without further complications. No consensus has been reached concerning the most adequate treatment for irresectable unicentric CD. METHODS: Case report of a 67 year old woman RESULTS: This report, describes the case of a 67-year-old woman with unicentric Castleman disease located in the right lower abdomen. The patient had symptoms of fatigue, dyspnoea and pain in the right lower abdomen. Computed tomography (CT)-examination revealed a tumour, which had grown to form a close relationship with the common iliac vessels and the sacral bone. A Laparotomy procedure revealed that the tumour was an irresectable mass. Neo-adjuvant radiotherapy (40Gy) was administered in order to downsize the tumour. Six weeks later a new CT-scan revealed a major reduction of the tumour, which enabled a successful radical resection of the tumour to be performed. Histopathological analysis of the tumour showed the hyaline vascular type of CD. CONCLUSIONS: Neo-adjuvant radiotherapy should be considered in case of an irresectable unicentric CD.

Zoete JP de

Evaluation of laparoscopic sleeve gastrectomy on weight loss and co-morbidity

Nienhuijs SW*, Zoete JP de*, Berende CA*, Hingh IH de*, Smulders JF*
Int J Surg. 2010;8(4):302-4. Epub 2010 Mar 19
Voor abstract zie: Nienhuijs SW

Zoete JP de

Advanced Care admission following bariatric surgery

Buise MP*, Van den Broek RJC, de Zoete JP*, Bindels AJGH*
Neth J Crit Care. 2010 april;14(2): 85-91
Voor abstract zie: Buise MP

Zoete JP de

Neoadjuvant radiotherapy of primary irresectable unicentric Castleman's disease: a case report and review of the literature

Vries IA de*, Acht MM van*, Demeyere TB, Lybeert ML*, Zoete JP de*, Nieuwenhuijzen GA*

Radiat Oncol. 2010;5(1):7

Voor abstract zie: Vries IA de

** = werkzaam in het Catharina-ziekenhuis*

Dermatologie

Artikelen

Krekels GA
How to run an effective and efficient dermatooncology unit: a Dutch approach
Geer S van der, Reijers H, Krekels G*
J Dtsch Dermatol Ges. 2010;8(1):15-9

The worldwide incidence of skin cancer (especially non-melanoma skin cancer) has risen dramatically over the last decades. Skin cancer, including pre-malignant lesions, is becoming a chronic disease. Adjustments in skin cancer health care need to be made. A disease management system for skin cancer is mandatory in order to avoid waiting lists and insure adequate treatment quality with ever growing numbers of patients requiring treatment. At the Catharina Hospital Eindhoven adjustments are being made on several levels of the dermato-oncology unit in collaboration with Eindhoven University of Technology. The model combines technological improvements, training health care workers, training of general practitioners and prevention of skin cancer. We discuss our ideas and clinical experiences with managing a dermatooncology unit.

Krekels GA
Need for a new skin cancer management strategy
van der Geer S, Reijers HA, van Tuijl HF, de Vries H, Krekels GA
Arch Dermatol. 2010 Mar;146(3):332-6

The worldwide incidence of skin cancer (especially nonmelanoma skin cancer) has increased markedly during the last decades. Skin cancer should be considered a chronic disease. To manage the future costs and quality of care for patients with skin cancer, a revised health strategy is needed. These new strategies should be combined into a disease management system that organizes health care for one well-documented health care problem using a systematic approach. This article explores multiple opportunities for the development of a disease management system regarding skin cancer that will provide structured and multidisciplinary care

Ostertag JU
Is the use of Steri-StripTM S for wound closure after coronary artery bypass grafting better than intracuticular suture?
Gevel DF van de*, Soliman Hamad MA*, Elenbaas TW*, Ostertag JU,* Schönberger JP*
Interact Cardiovasc Thorac Surg. 2010 Apr;10(4):561-4. [Epub ehead of print]
Voor abstract zie: Gevel DF van de

Boeken

Krekels GA, Geer S van der
Nonmelanoma huidkanker
Krekels G.A., Geer S van der
[s.l.]: Academic Pharmaceutical Products bv, 2010
ISBN9789057610974

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ECC & Bloedmanagement

Artikelen

Everts PA

Autologous platelet gel in total knee arthroplasty: a prospective randomized study

Horstmann WG, Slappendel R, van Hellemondt GG, Wymenga AW, Jack N, Everts PA*

Knee Surg Sports Traumatol Arthrosc. 2011 Jan;19(1):115-21. Epub 2010 Jul 18

PURPOSE: Total knee arthroplasty (TKA) is often associated with major postoperative blood loss, postoperative pain, and impaired wound healing. The application of autologous platelet gel (APG), prepared from the buffy coat of a unit of autologous blood, has been advocated to improve haemostasis after surgery, to decrease perioperative blood loss, diminish postoperative pain and to enhance the wound healing process. This randomized controlled pilot study was developed to assess the effects of APG after total knee arthroplasty on blood loss, wound healing, pain, range of motion, and hospital stay. METHOD: A prospective, randomized observer blind controlled trial was performed. Forty patients with only osteoarthritis of the knee were scheduled to have a TKA, and they were randomized into two groups. Patients in the treatment group were all treated with the application of autologous platelet gel after the prosthesis was implanted. Patients in the control group were treated with the same protocol but no APG was used. RESULTS: Preoperative and postoperative Hb levels showed no significant difference and allogenic blood transfusions were not given in either group. Haematomas were significantly larger in the control group than in the platelet gel group (P = 0.03). The pain score at rest was higher in the control group on the 3rd day (P = 0.04). Wound healing disturbances were seen in four patients in the control group and in no patients in the APG group (n.s.). Range of motion of the knee was similar postoperatively. Hospital stay was 6.2 days in the APG and 7.5 days in the control group (n.s.). CONCLUSION: In this prospective randomized pilot study on APG in total knee arthroplasty, differences in favour of the use of platelet gel were found, but these were subjective evaluations, marginal in effect, or did not reach statistical significance. The use of drains might have decreased the concentration of delivered platelets and may have diminished the effect. However, in this study, a statistically significant clinically important effect in favour of platelet gel application was not found. Further studies with larger numbers of patients, and without the use of drains, are warranted to investigate the possible benefits of autologous platelet gel in total knee arthroplasty.

Everts PA

Casuistiek: Allogene trombocytengel bij urologische patiënt met een verworven trombocytopathie

Curvers J*, Koldewijn E*, Everts PA*, Peters W*, Scharnhorst V*

Ned Tijdschr Bloedtransfusie 2010;3:94-96

Voor abstract zie: Curvers J

Everts PA
Autologe plaatjes-leukocyten gel: toepassing bij diverse chirurgische indicaties
Everts PA*, Everts-Koning JG, Scharnhorst V*, Curvers J*
Ned Tijdschr Bloedtransfusie 2010;3:87-93

Everts PA
Platelet leukocyte gel facilitates bone substitute growth and autologous bone growth in a goat model
Everts PA*, Delawi D, Mahoney CB, Erp A van*, Overdevest EP*, Zundert A van*, Knape JT, Dhert WJ
J Biomed Mater Res A. 2010;92(2):746-53

The aim of this study is to evaluate multiple conditions on the formation of bone growth in a goat model. We prepared from a unit of whole blood, platelet-leukocyte gel (PLG) to stimulate bone formation, based on the release of platelet growth factors. Two 3-compartment cages containing autologous bone, calcium phosphate, and trabecular metal were implanted onto goat spinal transverse processes. One cage was treated with PLG, prepared according to a standardized protocol. An untreated cage served as a control. To monitor bone formation overtime, fluorochrome markers were administered at 2, 3, and 5 weeks. Animals were sacrificed at 9 weeks after implantation. Bone growth in these 3-compartments cages was examined by histology and histomorphometry of nondecalcified sections using traditional light and epifluorescent microscopy. Compared to the control samples, bone growth in the PLG-treated autologous bone and calcium phosphate samples was significantly more. Fairly little bone growth was seen in PLG treated or untreated trabecular metal scaffolds. The results obtained from this goat model suggest a potential role for the application of autologous PLG during surgeries in which autologous bone grafts or calcium phosphate scaffolds are used.

Overdevest EP
Platelet leukocyte gel facilitates bone substitute growth and autologous bone growth in a goat model
Everts PA*, Delawi D, Mahoney CB, Erp A van*, Overdevest EP*, Zundert A van*, Knape JT, Dhert WJ
J Biomed Mater Res A. 2010;92(2):746-53
Voor abstract zie: Everts PA

** = werkzaam in het Catharina-ziekenhuis*

Geestelijke verzorging

Boek

Jordens, K, Neijnens, I
Oncologie en geestelijke verzorging
Jordens, Koen en Neijnens, Ingrid
Antwerpen, Apeldoorn : Garant, 2010
(Catharina-reeks, nr. 2)
ISBN 978-9-441-2678-5

De behandeling en begeleiding van oncologische patiënten is een belangrijk speerpunt van het Catharinaziekenhuis in Eindhoven. Dit boek focust op geestelijke verzorging binnen oncologische zorg. In het eerste deel wordt vanuit medische, verpleegkundige en organisatorische zijde een beeld geschetst van de oncologische zorg. Vervolgens wordt beschreven waarom en hoe geestelijke verzorging integraal deel uitmaakt van het totale zorgproces. In een tweede deel komen diverse vormen en aspecten van geestelijke verzorging aan bod. Mindfulness, ritueel handelen, geestelijke begeleiding en presentie zijn daarbij grote thema's. Het derde en laatste deel bestaat in een reflectie op actuele vragen en uitdagingen, zoals de veranderingen in de sociaal-culturele functie van religie en de invloed hiervan op inrichting en inhoud van geestelijke verzorging. Daarnaast wordt onderzocht in welke mate de invoering van marktwerking in de zorg kansen biedt of een bedreiging vormt voor menswaardige zorg.

Hoofdstuk in boek

Jordens, K
Impressie vanuit de verpleegkundige praktijk
Pp 40-9
Laar, E van de
Geestelijke verzorging en marktgestuurde zorg: Kans of bedreiging?
Pp 152-70
Neijnens, I
Mindfulness en geestelijke verzorging
Pp 73-86
Poel, F van de
Zielzorger
Pp 13-4, 71-2, 135-6
Rebel, A
Moreel beraad op de verpleegafdeling en de rol van de geestelijk verzorger
Pp 122-34
In: Jordens, Koen en Neijnens, Ingrid
Oncologie en geestelijke verzorging
Antwerpen, Apeldoorn : Garant, 2010
(Catharina-reeks, nr. 2)
ISBN 978-9-441-2678-5

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Geriatrie

Artikelen

Linden CM van der
Reasons for discontinuation of medication during hospitalization and documentation thereof: a descriptive study of 400 geriatric and internal medicine patients
Linden CM van der*, Jansen PA, Geerenstein EV van, Marum RJ van, Grouls RJ*, Egberts TC, Korsten EH*
Arch Intern Med. 2010 Jun 28;170(12):1085-7

Linden CM van der
Recurrence of adverse drug reactions following inappropriate re-prescription: better documentation, availability of information and monitoring are needed.
Linden CM van der *, Jansen PA, Marum RJ van, Grouls RJ*, Korsten EH*, Egberts AC
Drug Saf. 2010 Jul 1;33(7):535-8

Adverse drug reactions (ADRs) are a common, and often preventable, cause of hospital admission, especially in the elderly, and can occur during hospitalization. In this current opinion article, we present three cases of recurrence of a serious ADR due to re-prescription of a withdrawn medication that highlight the need for a system to prevent the undesirable re-prescription of medications withdrawn because of an ADR. In addition, we describe an electronic system that could help prevent undesirable re-prescription following an ADR. Such a system should document ADRs systematically at the patient level, make this information available to relevant healthcare providers and the patient, and flag represcription of the offending drug. The effectiveness and cost effectiveness of such a system would need to be determined.

Linden CM van der
Syndrome of inappropriate antidiuretic hormone secretion (SIADH) or hyponatraemia associated with valproic Acid: four case reports from the Netherlands and a case/non-case analysis of vigibase
Beers E, Puijenbroek EP van, Bartelink IH, Linden CM van der*, Jansen PA
Drug Saf.2010; 33(1):47-55

The Netherlands Pharmacovigilance Centre Lareb received four cases of severe symptomatic hyponatraemia or syndrome of inappropriate antidiuretic hormone secretion (SIADH) in association with valproic acid use, in which a causal relationship was suspected. This study describes these cases and gives support for this association from Vigibase, the adverse drug reaction (ADR) database of the WHO Collaborating Centre for International Drug Monitoring, the Uppsala Monitoring Centre. Cases of hyponatraemia in valproic acid users are described. In a case/non-case analysis, the strength of the association between reported cases of hyponatraemia and the use of valproic acid in Vigibase was established by calculating a reporting odds ratio, adjusted for possible confounding by concomitant medication. Four females aged 57, 67, 71 and 88 years developed symptomatic hyponatraemia or SIADH after starting valproic acid. Despite concomitant medication or co-morbidity, a causal relationship was plausible. In Vigibase, valproic acid is disproportionally associated with hyponatraemia and SIADH (corrected reporting

odds ratio 1.83 [95% CI 1.61, 2.08]). Based on the described cases and the reports from Vigibase, a causal relationship between valproic acid use and hyponatraemia or SIADH can be suspected. The mechanism by which valproic acid could cause hyponatraemia or SIADH has not been fully elucidated. Valproic acid use could lead to reduced sensitivity of hypothalamic osmoreceptors. It also might directly affect tubular cell function, thereby leading to SIADH. It might be expected that a combination of effects on the osmoreceptors and a lack of compensation of the salt-water unbalance by the nephrons causes SIADH in some patients using valproic acid. It could be a dose- or concentrationrelated adverse effect. In this report, severe symptomatic hyponatraemia and SIADH have been associated with the use of valproic acid. With this study, not only is the number of published cases doubled, but also the data from Vigibase strongly support the association. Since hyponatraemia and SIADH have a high morbidity, health professionals should be aware of this potential ADR.

** = werkzaam in het Catharina-ziekenhuis*

Gynaecologie

Artikelen

Hasaart TH

Induction versus expectant monitoring for intrauterine growth restriction at term: randomised equivalence trial (DIGITAT)

Boers KE, Vijgen SM, Bijlenga D, van der Post JA, Bekedam DJ, Kwee A, van der Salm PC, van Pampus MG, Spaanderman ME, de Boer K, Duvekot JJ, Bremer HA, Hasaart TH*, Delemarre FM, Bloemenkamp KW, van Meir CA, Willekes C, Wijnen EJ, Rijken M, le Cessie S, Roumen FJ, Thornton JG, van Lith JM, Mol BW, Scherjon SA; on behalf of the DIGITAT study group

BMJ. 2010 Dec 21;341:c7087

OBJECTIVE: To compare the effect of induction of labour with a policy of expectant monitoring for intrauterine growth restriction near term. DESIGN: Multicentre randomised equivalence trial (the Disproportionate Intrauterine Growth Intervention Trial At Term (DIGITAT)). SETTING: Eight academic and 44 non-academic hospitals in the Netherlands between November 2004 and November 2008. PARTICIPANTS: Pregnant women who had a singleton pregnancy beyond 36+0 weeks' gestation with suspected intrauterine growth restriction. INTERVENTIONS: Induction of labour or expectant monitoring. MAIN OUTCOME MEASURES: The primary outcome was a composite measure of adverse neonatal outcome, defined as death before hospital discharge, five minute Apgar score of less than 7, umbilical artery pH of less than 7.05, or admission to the intensive care unit. Operative delivery (vaginal instrumental delivery or caesarean section) was a secondary outcome. Analysis was by intention to treat, with confidence intervals calculated for the differences in percentages or means. RESULTS: 321 pregnant women were randomly allocated to induction and 329 to expectant monitoring. Induction group infants were delivered 10 days earlier (mean difference -9.9 days, 95% CI -11.3 to -8.6) and weighed 130 g less (mean difference -130 g, 95% CI -188 g to -71 g) than babies in the expectant monitoring group. A total of 17 (5.3%) infants in the induction group experienced the composite adverse neonatal outcome, compared with 20 (6.1%) in the expectant monitoring group (difference -0.8%, 95% CI -4.3% to 3.2%). Caesarean sections were performed on 45 (14.0%) mothers in the induction group and 45 (13.7%) in the expectant monitoring group (difference 0.3%, 95% CI -5.0% to 5.6%). CONCLUSIONS: In women with suspected intrauterine growth restriction at term, we found no important differences in adverse outcomes between induction of labour and expectant monitoring. Patients who are keen on non-intervention can safely choose expectant management with intensive maternal and fetal monitoring; however, it is rational to choose induction to prevent possible neonatal morbidity and stillbirth.

Hasaart TH

High thyrotrophin levels at end term increase the risk of breech presentation.

Kooistra L, Kuppens SM*, Hasaart TH*, Vader HL, Wijnen HA, Oei SG, Pop VJ

Clin Endocrinol (Oxf). 2010 Aug 13. [Epub ahead of print]

Voor abstract zie: Kuppens SM

Hasaart TH

Een kraamvrouw met onbegrepen koorts en een pasgeborene met een onbegrepen tachycardie: tuberculose bij moeder en kind

Lensen EJM, van Heerbeek HH, Brackel HJ*, Hasaart THM*

Nederlands Tijdschrift voor Obstetrie & Gynaecologie 2010;123:165-68

Voor abstract zie: Brackel HJ

Hasaart TH

Minder stuitbevallingen na invoering van beleidsprotocol voor versie

Kuppens SMI*, Francois AMH, Hasaart THM*, van der Donk MWP, Pop VJM

Tijdschrift voor Verloskunde. 2010;35:33-38

Hermans RH

Size of sentinel-node metastasis and chances of non-sentinel-node involvement and survival in early stage vulvar cancer: results from GROINSS-V, a multicentre observational study

Oonk MH, Hemel BM van, Hollema H, Hullu JA de, Ansink AC, Vergote I, Verheijen RH, Maggioni A, Gaarenstroom KN, Baldwin PJ, Dorst EB van, Velden J van der, Hermans RH*, Putten HW van der*, Drouin P, Runnebaum IB, Sluiter WJ, Zee AG van der

Lancet Oncol. 2010 Jul;11(7):646-52. Epub 2010 May 25

BACKGROUND: Currently, all patients with vulvar cancer with a positive sentinel node undergo inguinofemoral lymphadenectomy, irrespective of the size of sentinel-node metastases. Our study aimed to assess the association between size of sentinel-node metastasis and risk of metastases in nonsentinel nodes, and risk of disease-specific survival in early stage vulvar cancer. METHODS: In the GROningen INternational Study on Sentinel nodes in Vulvar cancer (GROINSS-V), sentinel-node detection was done in patients with T1-T2 (<4 cm) squamous-cell vulvar cancer, followed by inguinofemoral lymphadenectomy if metastatic disease was identified in the sentinel node, either by routine examination or pathological ultrastaging. For the present study, sentinel nodes were independently reviewed by two pathologists. FINDINGS: Metastatic disease was identified in one or more sentinel nodes in 135 (33%) of 403 patients, and 115 (85%) of these patients had inguinofemoral lymphadenectomy. The risk of non-sentinel-node metastases was higher when the sentinel node was found to be positive with routine pathology than with ultrastaging (23 of 85 groins vs three of 56 groins, p=0.001). For this study, 723 sentinel nodes in 260 patients (2.8 sentinel nodes per patient) were reviewed. The proportion of patients with non-sentinel-node metastases increased with size of sentinelnode metastasis: one of 24 patients with individual tumour cells had a non-sentinel-node metastasis; two of 19 with metastases 2 mm or smaller; two of 15 with metastases larger than 2 mm to 5 mm; and ten of 21 with metastases larger than 5 mm. Disease-specific survival for patients with sentinel-node metastases larger than 2 mm was lower than for those with sentinel-node metastases 2 mm or smaller (69.5%vs 94.4%, p=0.001). INTERPRETATION: Our data show that the risk of non-sentinel-node metastases increases with size of sentinel-node metastasis. No size cutoff seems to exist below which chances of non-sentinel-node metastases are close to zero. Therefore, all patients with sentinel-node metastases should have additional groin treatment. The

prognosis for patients with sentinel-node metastasis larger than 2 mm is poor, and novel treatment regimens should be explored for these patients.

Kuppens SM

High thyrotrophin levels at end term increase the risk of breech presentation

Kooistra L, Kuppens SM*, Hasaart TH*, Vader HL, Wijnen HA, Oei SG, Pop VJ

Clin Endocrinol (Oxf). 2010 Nov;73(5):661-5

Abstract Objective: To study the relationship between maternal TSH and breech presentation at term. Design: Combined data sets of two prospective studies to obtain adequate epidemiological power. Patients: 1058 healthy pregnant women (58 breech, 1000 cephalic) and 131 women who presented in breech at an obstetrical outpatient clinic. Measurements: Maternal thyroid parameters (TSH, FT4, TPOAb) and fetal presentation were assessed in both groups between 35-38 weeks gestation. Power calculations suggested that at least 148 breech cases were required. Results: The characteristics of the women in breech in both samples were similar. Women in breech (n=58+131) had significantly higher TSH (but not FT4) than those (n=1000) with cephalic presentation (Mann-Whitney U, p = 0.003). Different cut-offs were used to define high TSH in the 916 TPO-Ab negative women with cephalic presentation: the 90(th), 95(th) and 97.5(th) percentiles were 2.4mIU/l (n=149), 2.7 mIU/l (n=77) and 3.2 mIU/l (n=37). The prevalence rates of breech presentation in these women were all higher compared to the prevalence of breech in women below these cut-offs (df=1, p < 0.01). The relative risk of the 149 women with a TSH > 90(th) percentile (> 2.4 mIU/l) to present in breech was 1.82 (95% CI: 1.30 - 2.56). Conclusions: Women with high TSH at end term are at risk for breech presentation. Substantial evidence for a relation between breech presentation and neurodevelopmental delay exists. Since high TSH during gestation has also been linked to poor neurodevelopment, the relation between breech presentation and poor neurodevelopment might be thyroid-related.

Kuppens SM

Implementation of the external cephalic version in breech delivery Dutch national implementation study of external cephalic version

Vlemmix F, Rosman AN, Fleuren MA, Rijnders ME, Beuckens A, Haak MC, Akerboom BM, Bais JM, Kuppens SM*, Papatsonis DN, Opmeer BC, Post JA van der, Mol BW, Kok M

BMC Pregnancy Childbirth. 2010 May 10;10(1):20

BACKGROUND: Breech presentation occurs in 3 to 4 % of all term pregnancies. External cephalic version (ECV) is proven effective to prevent vaginal breech deliveries and therefore it is recommended by clinical guidelines of the Royal Dutch Organisation for Midwives (KNOV) and the Dutch Society for Obstetrics and Gynaecology (NVOG). Implementation of ECV does not exceed 50 to 60% and probably less. We aim to improve the implementation of ECV to decrease maternal and neonatal morbidity and mortality due to breech presentations. This will be done by defining barriers and facilitators of implementation of ECV in the Netherlands. An innovative implementation strategy will be developed based on improved patient counselling and thorough instructions of health care providers for counselling. METHODS: The ultimate purpose of this implementation study is to improve counselling of pregnant women and information of clinicians to realize a better

implementation of ECV. The first phase of the project is to detect the barriers and facilitators of ECV. The next step is to develop an implementation strategy to inform and counsel pregnant women with a breech presentation, and to inform and educate care providers. In the third phase, the effectiveness of the developed implementation strategy will be evaluated in a randomised trial. The study population is a random selection of midwives and gynaecologists from 60 to 100 hospitals and practices. Primary endpoints are number of counselled women. Secondary endpoints are process indicators, the amount of fetes in cephalic presentation at birth, complications due to ECV, the number of caesarean sections and perinatal condition of mother and child. Cost effectiveness of the implementation strategy will be measured. DISCUSSION: This study will provide evidence for the cost effectiveness of a structural implementation of external cephalic versions to reduce the number of breech presentations at term.

Kuppens SM

Minder stuitbevallingen na invoering van beleidsprotocol voor versie

Kuppens SMI*, Francois AMH, Hasaart THM*, van der Donk MWP, Pop VJM
Tijdschrift voor Verloskunde. 2010;35:33-38

Lenselink CH

Effect of the menstrual cycle and hormonal contraceptives on human papillomavirus detection in young, unscreened women

Schmeink CE, Massuger LF, Lenselink CH*, Quint WG, Melchers WJ, Bekkers RL
Obstet Gynecol. 2010 Jul;116(1):67-75

OBJECTIVE: To estimate the effect of the menstrual cycle and oral contraceptive pill (OCP) use on the prevalence, incidence, and persistence of human papillomavirus (HPV). METHODS: A longitudinal study was conducted among 2,065 women aged 18-29 years. The women returned a self-collected cervicovaginal sample and filled out a questionnaire. A total of 1,812 women participated at all three time points, month 0, month 6, and month 12. RESULTS: Low- and high-risk HPV prevalence at study entry was 8.9% and 11.8%, respectively. The annual incidence of low-risk HPV infections was 12.5% and the persistence was 2.0%. For high-risk HPV, the incidence and persistence was 12.1% and 4.5%, respectively. These results did not differ between OCP users and nonusers. A significant relationship between high-risk HPV detection and the timing of sampling was found when OCP users and nonusers were analyzed separately. In the second half of the menstrual cycle, high-risk HPV detection decreased in nonusers (P=.007) and increased in OCP users (P=.021). When women used OCPs continuously, high-risk HPV detection returned to the level of the first half of the menstrual cycle. CONCLUSION: Highrisk HPV detection was significantly influenced by sample timing in the menstrual cycle when analyzed separately for OCP users and women with a natural menstrual cycle. This may have implications in the future, when high-risk HPV detection may become a primary screening tool in cervical cancer prevention.

Putten HW van der

Size of sentinel-node metastasis and chances of non-sentinel-node involvement and survival in early stage vulvar cancer: results from GROINSS-V, a multicentre observational study

Oonk MH, Hemel BM van, Hollema H, Hullu JA de, Ansink AC, Vergote I, Verheijen RH, Maggioni A, Gaarenstroom KN, Baldwin PJ, Dorst EB van, Velden J van der, Hermans RH*, Putten HW van der*, Drouin P, Runnebaum IB, Sluiter WJ, Zee AG van der

Lancet Oncol. 2010 Jul;11(7):646-52

Voor abstract zie: Hermans RH

Simons M

A patient with lichen sclerosus, Langerhans cell histiocytosis, and invasive squamous cell carcinoma of the vulva

Simons M*, Van De Nieuwenhof HP, Van Der Avoort IA, Bulten J, De Hullu JA

Am J Obstet Gynecol. 2010 Aug;203(2):e7-10. Epub 2010 Jun 11

We report a patient with vulvar lichen sclerosus, Langerhans cell histiocytosis (LCH), and later vulvar cancer. In LCH, high amounts of non functional Langerhans cells are present in the affected tissue, making it possible that LCH may have contributed to vulvar cancer development in this patient.

** = werkzaam in het Catharina-ziekenhuis*

Inwendige geneeskunde

&

Intensive Care

Artikelen

Beijers HJ

Body Composition as Determinant of Thrombin Generation in Plasma. The Hoorn Study

Beijers HJ*, Ferreira I, Spronk HM, Bravenboer B*, Dekker JM, Nijpels G, Ten Cate H, Stehouwer CD

Arterioscler Thromb Vasc Biol., 2010 Dec;30(12):2639-47. Epub 2010 Sep 16

OBJECTIVE: The association between obesity and cardiovascular disease and venous thromboembolism might, at least partially, be explained by a hypercoagulable state. The extent to which body fat mass and its distribution contribute to a hypercoagulable state is unknown. In this study, we investigated the association between body composition and thrombin generation and evaluated the potential mediating role of low-grade inflammation. METHODS AND RESULTS: We studied 586 individuals from the Hoorn Study (mean age, 69.7±6.5 years, 298 women) in whom body composition was assessed by whole body dual-energy absorptiometry. Thrombin generation was measured using the calibrated automated thrombogram. Multiple regression analyses showed a positive association between total body fat and thrombin generation in women but not in men. Detailed analyses of regional body composition showed that central but not peripheral fat mass was associated with greater thrombin generation and that there was a trend toward an inverse association with peripheral lean mass. The reported positive associations were partially attenuated by low-grade inflammation, however. CONCLUSIONS: Body fat mass, in particular a central pattern of fat distribution, is associated with higher levels of thrombin generation in elderly women but not in men. This association may partially be explained by adiposity-related low-grade inflammation, but this hypothesis needs to be further investigated in mechanistic/prospective studies.

Beijers HJ

High prevalence of diabetes mellitus in patients with liver cirrhosis

Wlazlo N*, Beijers HJ*, Schoon EJ*, Sauerwein HP, Stehouwer CD, Bravenboer B*

Diabet Med. 2010 Nov;27(11):1308-11

Voor abstract zie: Wlazlo N

Bindels AJ

Advanced Care admission following bariatric surgery

Buise MP*, Van den Broek RJC, de Zoete JP*, Bindels AJGH*

Neth J Crit Care. 2010 april;14(2):85-91

Voor abstract zie: Buise MP

Bindels AJ

Physicians' and nurses' opinions on selective decontamination of the digestive tract and selective oropharyngeal decontamination: a survey

Jongerden IP, Smet AM de, Kluytmans JA, Velde LF te, Dennesen PJ, Wesselink RM, Bouw MP, Spanjersberg R, Bogaers-Hofman D, Meer NJ van der, Vries JW de, Kaasjager K, Iterson M van, Kluge GH, Werf TS van der, Harinck HI, Bindels AJ*, Pickkers P, Bonten MJ

Crit Care. 2010 Jul 13;14(4):R132

INTRODUCTION: Use of selective decontamination of the digestive tract (SDD) and selective oropharyngeal decontamination (SOD) in intensive care patients has been controversial for years. Through regular questionnaires we determined expectations concerning SDD (effectiveness) and experience with SDD and SOD (workload and patient friendliness), as perceived by nurses and physicians. METHODS: A survey was embedded in a group-randomized, controlled, cross-over multicenter study in the Netherlands in which, during three 6-month periods, SDD, SOD or standard care was used in random order. At the end of each study period, all nurses and physicians from participating intensive care units (ICUs) received study questionnaires. RESULTS: In all, 1024 (71%) of 1450 questionnaires were returned by nurses and 253 (82%) of 307 by physicians. Expectations that SDD improved patient outcome increased from 71% and 77% of respondents after the first two study periods to 82% at the end of the study (P=0.004), with comparable trends among nurses and physicians. Nurses considered SDD to impose a higher workload (median 5.0, on a scale from 1 (low) to 10 (high)) than SOD (median 4.0) and standard care (median 2.0). Both SDD and SOD were considered less patient friendly than standard care (medians 4.0, 4.0 and 6.0, respectively). According to physicians, SDD had a higher workload (median 5.5) than SOD (median 5.0), which in turn was higher than standard care (median 2.5). Furthermore, physicians graded patient friendliness of standard care (median 8.0) higher than that of SDD and SOD (both median 6.0). CONCLUSIONS: Although perceived effectiveness of SDD increased as the trial proceeded, both among physicians and nurses, SOD and SDD were, as compared to standard care, considered to increase workload and to reduce patient friendliness. Therefore, education about the importance of oral care and on the effects of SDD and SOD on patient outcomes will be important when implementing these strategies. Trial registration: ISRCTN35176830.

Bindels AJ

Treatment of hypophosphatemia in the intensive care unit: a review

Geerse DA*, Bindels AJ*, Kuiper MA, Roos AN*, Spronk PE, Schultz MJ

Crit Care. 2010;14(4):R147

Voor abstract zie: Geerse DA

Bindels AJ

Using a clinical decision support system to determine the quality of antimicrobial dosing in intensive care patients with renal insufficiency

Helmons PJ*, Grouls RJ*, Roos AN*, Bindels AJ*, Wessels-Basten SJ*, Ackerman EW*, Korsten EH*

Qual Saf Health Care 2010;19(1):22-6

Voor abstract zie: Helmons PJ

Blonk MC

Implementation of osteoporosis guidelines: a survey of five large fracture liaison services in the Netherlands

Huntjens KM, van Geel TA, Blonk MC*, Hegeman JH, van der Elst M, Willems P, Geusens PP, Winkens B, Brink P, van Helden SH

Osteoporos Int. 2010 Nov 4. [Epub ahead of print]

Implementation of case findings according to guidelines for osteoporosis in fracture patients presenting at a Fracture Liaison Service (FLS) was evaluated. Despite one guideline, all FLSs differed in the performance of patient selection and prevalence of clinical risk factors (CRFs) indicating the need for more concrete and standardised guidelines. INTRODUCTION: The aim of the study was to evaluate the implementation of case findings according to guidelines for osteoporosis in fracture patients presenting at FLSs in the Netherlands. METHODS: Five FLSs were contacted to participate in this prospective study. Patients older than 50 years with a recent clinical fracture who were able and were willing to participate in fracture risk evaluation were included. Performance was evaluated by criteria for patient recruitment, patient characteristics, nurse time, evaluated clinical risk factors (CRFs), bone mineral density (BMD) and laboratory testing and results of CRFs and BMD are presented. Differences between FLSs were analysed for performance (by chi-square and Student's t test) and for prevalence of CRFs (by relative risks (RR)). RESULTS: All FLSs had a dedicated nurse spending 0.9 to 1.7 h per patient. During 39 to 58 months follow-up, 7,199 patients were evaluated (15 to 47 patients/centre/month; mean age, 67 years; 77% women). Major differences were found between FLSs in the performance of patient recruitment, evaluation of CRFs, BMD and laboratory testing, varying between 0% and 100%. The prevalence of CRFs and osteoporosis varied significantly between FLSs (RR between 1.7 and 37.0, depending on the risk factor). CONCLUSION: All five participating FLSs with a dedicated fracture nurse differed in the performance of patient selection, CRFs and in the prevalence of CRFs, indicating the need for more concrete and standardised guidelines to organise evaluation of patients at the time of fracture in daily practice.

Blonk MC

Percutaneous Vertebroplasty Is Not a Risk Factor for New Osteoporotic Compression Fractures: Results from VERTOS II

Klazen CA, Venmans A, Vries J de, Rooij WJ van, Jansen FH*, Blonk MC*, Lohle PN, Juttmann JR, Buskens E, Everdingen KJ van , Muller A, Fransen H, Elgersma OE, Mali WP, Verhaar HJ

AJNR Am J Neuroradiol. 2010 Sep;31(8):1447-50. Epub 2010 Jul 22

Voor abstract zie: Jansen FH

Blonk MC

Vertebroplasty versus conservative treatment in acute osteoporotic vertebral compression fractures (Vertos II): an open-label randomised trial

Klazen CA, Lohle PN, de Vries J, Jansen FH*, Tielbeek AV*, Blonk MC*, Venmans A, van Rooij WJ, Schoemaker MC, Juttmann JR, Lo TH, Verhaar HJ, van der Graaf Y, van Everdingen KJ, Muller AF, Elgersma OE, Halkema DR, Fransen H, Janssens X, Buskens E, Mali WP

Lancet. 2010 Sep 25;376(9746):1085-92, Epub 2010 Aug 9

Comment in: Lancet. 2010 Sep 25;376(9746):1031-3.

Voor abstract zie: Jansen FH

Bravenboer B

Abacavir/Lamivudine/Zidovudine Maintenance After Standard Induction in Antiretroviral Therapy-Naïve Patients: FREE Randomized Trial Interim Results

Sprenger HG, Langebeek N, Mulder PG, Napel CH ten, Vriesendorp R, Hoepelman AI, Legrand JC, Koopmans PP, Kasteren ME van, Bravenboer B*, Kate RW ten, Groeneveld PH, Werf TS van der, Gisolf EH, Richter C

AIDS Patient Care STDS. 2010 Jun;24(6):361-6.

Abstract Maintenance with a triple nucleoside reverse transcriptase Inhibitor (NRTI) regimen after successful induction with a dual NRTI/protease inhibitor (PI) combination may be advantageous, because of low pill burden, favorable lipids, and less drug interactions. This strategy to become free of PI-related problems without losing viral efficacy has not been formally tested. We performed a randomized, open-label, multicenter, 96-week comparative study in antiretroviral therapy (ART)-naïve patients with CD4 </=350 cells/mm(3) and HIV-1 RNA concentrations (viral load [VL]) greater than 30,000 copies per milliliter. Patients were randomized after reaching VL less than 50 copies per millilitre on two consecutive occasions between 12 and 24 weeks after start of zidovudine/lamuvidine and lopinavir/ritonavir combination. Eligible subjects switched to abacavir/lamivudine/zidovudine (TZV) or continued the PI-containing regimen. Here we present the 48-week data with virologic success rate (failure: VL > 50 copies per milliliter). Two hundred seven patients had similar baseline (BL) characteristics: median CD4 180 cells/mm(3), median VL 5.19 log(10) copies per milliliter. One hundred twenty subjects (58%) met randomization criteria. Baseline VL differed significantly between dropouts and randomized subjects (median 5.41 versus 5.06 log(10) copies per milliliter, p = 0.017), as did CD4 cells (median 160 and 200 cells/mm(3), p = 0.044). Sixty-one subjects received TZV and 59 subjects continued NRTIs/PI. At week 48, 2 patients in the TZV group and 5 in the PI group did not have a sustained virologic suppression (log rank test; p = 0.379). CD4 counts increased significantly in both arms. In ART-naïve patients, TZV maintenance had similar antiviral efficacy compared to continued standard ART at 48 weeks after baseline. Patients on successful standard ART can be safely switched to a NRTI-only regimen, at least for the tested time period.

Bravenboer B

Body Composition as Determinant of Thrombin Generation in Plasma. The Hoorn Study

Beijers HJ*, Ferreira I, Spronk HM, Bravenboer B*, Dekker JM, Nijpels G, Ten Cate H, Stehouwer CD

Arterioscler Thromb Vasc Biol., 2010 Dec;30(12):2639-47. Epub 2010 Sep 16

Voor abstract zie: Beijers HJ

Bravenboer B

Death rates in HIV-positive antiretroviral-naive patients with CD4 count greater than 350 cells per microL in Europe and North America: a pooled cohort observational study Study Group on Death Rates at High CD4 Count in Antiretroviral Naive Patients

Lodwick RK, Sabin CA, Porter K, Ledergerber B, van Sighem A, Cozzi-Lepri A, Khaykin P, Mocroft A, Jacobson L, De Wit S, Obel N, Castagna A, Wasmuth JC, Gill J, Klein MB, Gange S, Riera M, Mussini C, Gutiérrez F, Touloumi G, Carrieri P, Guest JL, Brockmeyer NH, Phillips AN, Bravenboer B

Lancet. 2010 Jul 31;376(9738):340-5. , Epub 2010 Jul 15

BACKGROUND: Whether people living with HIV who have not received antiretroviral therapy (ART) and have high CD4 cell counts have higher mortality than the general population is unknown. We aimed to examine this by analysis of pooled data from industrialised countries. METHODS: We merged data on demographics, CD4 cell counts, viral-load measurements, hepatitis C co-infection status, smoking status, date of death, and whether death was AIDS-related or not from 23 European and North American cohorts. We calculated standardised mortality ratios (SMRs) standardised by age, sex, and year, stratifying by risk group. Data were included for patients aged 20-59 years who had at least one CD4 count greater than 350 cells per microL while ART naive. All pre-ART CD4 counts greater than 350 cells per microL from January, 1990, to December, 2004, were included. We investigated mortality for four risk groups--men who have sex with men, heterosexual people, injecting drug users, and those at other or unknown risk. The association between CD4 cell count and death rate was investigated by use of Poisson regression methods. FINDINGS: Data were analysed for 40,830 patients contributing 80,682 person-years of follow-up. Of 419 deaths, 401 were used in the SMR analysis: 100 men who have sex with men (SMR 1.30, 95% CI 1.06-1.58); 68 heterosexual people (2.94, 2.28-3.73); 203 injecting drug users (9.37, 8.13-10.75); and 30 in the other or unknown risk category (4.57, 3.09-6.53). Compared with CD4 counts of 350-499 cells per microL, death rate was lower in patients with counts of 500-699 cells per microL (adjusted rate ratio 0.77, 95% CI 0.61-0.95) and counts of 700 cells per microL (0.66, 0.52-0.85). INTERPRETATION: In HIV-infected ART-naive patients with high CD4 cell counts, death rates were raised compared with the general population. In men who have sex with men this was modest, suggesting that a substantial proportion of the increased risk in other groups is due to confounding by other factors. Even though the increased risk is small, new studies of potential benefits of ART in this group are merited.

Bravenboer B

Effect of rosiglitazone on progression of coronary atherosclerosis in patients with type 2 diabetes mellitus and coronary artery disease: the assessment on the prevention of progression by rosiglitazone on atherosclerosis in diabetes patients with cardiovascular history trial

Gerstein HC, Ratner RE, Cannon CP, Serruys PW, García-García HM, van Es GA, Kolatkar NS, Kravitz BG, Miller DM, Huang C, Fitzgerald PJ, Nesto RW, Bravenboer B; APPROACH Study Group

Circulation. 2010 Mar 16;121(10):1176-87. Epub 2010 Mar 1

BACKGROUND: Rosiglitazone has several properties that may affect progression of atherosclerosis. The Assessment on the Prevention of Progression by Rosiglitazone on Atherosclerosis in Diabetes Patients With Cardiovascular History (APPROACH) study was undertaken to determine the effect of the thiazolidinedione rosiglitazone on coronary atherosclerosis as assessed by intravascular ultrasound compared with the sulfonylurea glipizide. METHODS AND RESULTS: This was a randomized, double-blind, controlled 18-month study in 672 patients aged 30 to 80 years with established type 2 diabetes mellitus treated by lifestyle, 1 oral agent, or submaximal doses of 2 oral agents who had at least 1 atherosclerotic plaque with 10% to 50% luminal narrowing in a coronary artery that had not undergone intervention during a clinically indicated coronary angiography or percutaneous coronary intervention. The primary outcome was change in percent atheroma volume in the longest and least angulated epicardial coronary artery that had not undergone intervention. Secondary outcomes included change in normalized total atheroma volume and change in total atheroma volume in the most diseased baseline 10-mm segment. Rosiglitazone did not significantly reduce the primary outcome of percent atheroma volume compared with glipizide (-0.64%; 95% confidence interval, -1.46 to 0.17; P=0.12). The secondary outcome of normalized total atheroma volume was significantly reduced by rosiglitazone compared with glipizide (-5.1 mm(3); 95% confidence interval, -10.0 to -0.3; P=0.04); however, no significant difference between groups was observed for the change in total atheroma volume within the most diseased baseline 10-mm segment (-1.7 mm(3); 95% confidence interval, -3.9 to 0.5; P=0.13). CONCLUSIONS: Rosiglitazone did not significantly decrease the primary end point of progression of coronary atherosclerosis more than glipizide in patients with type 2 diabetes mellitus and coronary atherosclerosis.

Bravenboer B

High prevalence of diabetes mellitus in patients with liver cirrhosis

Wlazlo N*, Beijers HJ*, Schoon EJ*, Sauerwein HP, Stehouwer CD, Bravenboer B*

Diabet Med. 2010 Nov;27(11):1308-11

Voor abstract zie: Wlazlo N

Bravenboer B

Low back pain and MRIabnormalities: atypical polymyalgia rheumatica

Nick Wlazlo, Bert Bravenboer, Rik Pijpers en Maarten C. de Rijk

NED TIJDSCHR GENEESKD. 2010;154:A2300

Voor abstract zie: Wlazlo N

Bravenboer B

Life expectancy of recently diagnosed asymptomatic HIV-infected patients approaches that of uninfected individuals

van Sighem AI, Gras LA, Reiss P, Brinkman K, de Wolf F, Bravenboer B; ATHENA national observational cohort study

AIDS. 2010 Jun 19;24(10):1527-35

OBJECTIVE: To compare life expectancies between recently diagnosed HIV-infected patients and age and sex-matched uninfected individuals from the general population. DESIGN: : National observational HIV cohort in the Netherlands. METHODS: Four thousand, six hundred and twelve patients diagnosed with HIV between 1998 and 2007 and still antiretroviral therapy-naive as of 24 weeks after diagnosis were selected. Progression to death compared to the age and sex-matched general population was studied with a multivariate hazards model in 4174 (90.5%) patients without AIDS events at 24 weeks. Life expectancy and number of life years lost were calculated using the predicted survival distribution. RESULTS: During 17 580 person-years of follow-up since 24 weeks after diagnosis [median follow-up 3.3 years, interquartile range (IQR) 1.6-5.8], 118 deaths occurred, yielding a mortality rate of 6.7 [95% confidence interval (CI) 5.5-8.0] per 1000 person-years. Median CD4 cell counts at 24 weeks were 480 cells/microl (IQR 360-650). According to the model, the median number of years lived from age 25 was 52.7 (IQR 44.2-59.3; general population 53.1) for men and 57.8 (49.2-63.7; 58.1) for women without CDC-B event. The number of life years lost varied between 0.4 if diagnosed with HIV at age 25 and 1.4 if diagnosed at age 55; for patients with a CDC-B event this range was 1.8-8.0 years. CONCLUSION: The life expectancy of asymptomatic HIV-infected patients who are still treatment-naïve and have not experienced a CDC-B or C event at 24 weeks after diagnosis approaches that of noninfected individuals. However, follow-up time is short compared to the expected number of years lived.

Bravenboer B

Predicting the risk of cardiovascular disease in HIV-infected patients: the data collection on adverse effects of anti-HIV drugs study

Friis-Møller N, Thiébaut R, Reiss P, Weber R, Monforte AD, De Wit S, El-Sadr W, Fontas E, Worm S, Kirk O, Phillips A, Sabin CA, Lundgren JD, Law MG; DAD study group

Eur J Cardiovasc Prev Rehabil. 2010 Oct;17(5):491-501

AIMS: HIV-infected patients receiving combination antiretroviral therapy may experience metabolic complications, potentially increasing their risk of cardiovascular diseases (CVDs). Furthermore, exposures to some antiretroviral drugs seem to be independently associated with increased CVD risk. We aimed to develop cardiovascular risk-assessment models tailored to HIV-infected patients. METHODS AND RESULTS: Prospective multinational cohort study. The data set included 22,625 HIVinfected patients from 20 countries in Europe and Australia who were free of CVD at entry into the Data collection on Adverse Effects of Anti-HIV Drugs Study. Using cross-validation methods, separate models were developed to predict the risk of myocardial infarction, coronary heart disease, and a composite CVD endpoint. Model performance was compared with the Framingham score. The models included age, sex, systolic blood pressure, smoking status, family history of CVD, diabetes, total

cholesterol, HDL cholesterol and indinavir, lopinavir/r and abacavir exposure. The models performed well with area under the receiver operator curve statistics of 0.783 (range 0.642-0.820) for myocardial infarction, 0.776 (0.670-0.818) for coronary heart disease and 0.769 (0.695-0.824) for CVD. The models estimated more accurately the outcomes in the subgroups than the Framingham score. CONCLUSION: Risk equations developed from a population of HIV-infected patients, incorporating routinely collected cardiovascular risk parameters and exposure to individual antiretroviral therapy drugs, might be more useful in estimating CVD risks in HIV-infected persons than conventional risk prediction models.

Bravenboer B
Primary squamous cell carcinoma of the thyroid years after radioactive iodine treatment
Yucel H*, Schaper NC, Beek M van*, Bravenboer B*
Neth J Med. 2010 May;68(5):224-6
Voor abstract zie: Yucel H

Bravenboer B
Renal abnormalities in a family with Alagille syndrome
Yucel H*, Hoorntje SJ*, Bravenboer B*
Neth J Med. 2010; 68(1):38-39

Bravenboer B
Twelve type 2 diabetes susceptibility loci identified through large-scale association analysis
Voight BF, Scott LJ, Steinthorsdottir V, Morris AP, Dina C, Welch RP, Zeggini E, Huth C, Aulchenko YS, Thorleifsson G, McCulloch LJ, Ferreira T, Grallert H, Amin N, Wu G, Willer CJ, Raychaudhuri S, McCarroll SA, Langenberg C, Hofmann OM, Dupuis J, Qi L, Segrè AV, Hoek M van, Navarro P, Bravenboer B*,; MAGIC investigators; GIANT Consortium
Nat Genet. 2010 Jul;42(7):579-89

By combining genome-wide association data from 8,130 individuals with type 2 diabetes (T2D) and 38,987 controls of European descent and following up previously unidentified meta-analysis signals in a further 34,412 cases and 59,925 controls, we identified 12 new T2D association signals with combined P<5x10(-8). These include a second independent signal at the KCNQ1 locus; the first report, to our knowledge, of an X-chromosomal association (near DUSP9); and a further instance of overlap between loci implicated in monogenic and multifactorial forms of diabetes (at HNF1A). The identified loci affect both beta-cell function and insulin action, and, overall, T2D association signals show evidence of enrichment for genes involved in cell cycle regulation. We also show that a high proportion of T2D susceptibility loci harbor independent association signals influencing apparently unrelated complex traits.

Creemers GJ

Impact van apotheekinterventies op de medicatieveiligheid door introductie van de klinische beslisregel 'opioïde-laxans gebruik' in het ziekenhuis

Doppen AMJ*, Scheepers-Hoeks AMJW*, Suijlekom JA van*, Creemers GJ*, Ackerman EW,* Wessels- Basten SJ*, Grouls RJE*

PW Wetenschappelijk Platform. 2010;4(10):172-176

Creemers GJ

A CYP3A4 phenotype-based dosing algorithm for individualized treatment of irinotecan

Bol JM van der, Mathijssen RH, Creemers GJ*, Planting AS, Loos WJ, Wiemer EA, Friberg LE, Verweij J, Sparreboom A, Jong FA de

Clin Cancer Res. 2010;16(2):736-42

PURPOSE: Irinotecan, the prodrug of SN-38, is extensively metabolized by cytochrome P450-3A4 (CYP3A4). A randomized trial was done to assess the utility of an algorithm for individualized irinotecan dose calculation based on a priori CYP3A4 activity measurements by the midazolam clearance test. EXPERIMENTAL DESIGN: Patients were randomized to receive irinotecan at a conventional dose level of 350 mg/m(2) (group A) or doses based on an equation consisting of midazolam clearance, gammaglutamyl- transferase, and height (group B). Pharmacokinetics and toxicities were obtained during the first treatment course. RESULTS: Demographics of 40 evaluable cancer patients were balanced between both groups, including UGT1A1*28 genotype and smoking status. The absolute dose of irinotecan ranged from 480 to 800 mg in group A and 380 to 1,060 mg in group B. The mean absolute dose and area under the curve of irinotecan and SN-38 were not significantly different in either group (P> 0.18). In group B, the interindividual variability in the area under the curve of irinotecan and SN-38 was reduced by 19% and 25%, respectively (P > 0.22). Compared with group A, the incidence of grades 3 to 4 neutropenia was >4-fold lower in group B (45 versus 10%; P = 0.013). The incidence of grades 3 to 4 diarrhea was equal in both groups (10%). CONCLUSIONS: Incorporation of CYP3A4 phenotyping in dose calculation resulted in an improved predictability of the pharmacokinetic and toxicity profile of irinotecan, thereby lowering the incidence of severe neutropenia. In combination with UGT1A1*28 genotyping, CYP3A4 phenotype determination should be explored further as a strategy for the individualization of irinotecan treatment.

Creemers GJ

The BRAF V600E mutation is an independent prognostic factor for survival in stage II and stage III colon cancer patients

Fariña-Sarasqueta A, Lijnschoten G van, Moerland E, Creemers GJ*, Lemmens VE, Rutten HJ*, Brule AJ van den*

Ann Oncol. 2010 Dec;21(12):2396-402. Epub 2010 May 25

BACKGROUND: Molecular markers in colon cancer are needed for a more accurate classification and personalized treatment. We determined the effects on clinical outcome of the BRAF mutation, microsatellite instability (MSI) and KRAS mutations in stage II and stage III colon carcinoma. PATIENTS AND METHODS: Stage II colon carcinoma patients (n = 106) treated with surgery only and 258 stage III patients all

adjuvantly treated with 5-fluorouracil chemotherapy were included. KRAS mutations in codons 12 and 13, V600E BRAF mutation and MSI status were determined. RESULTS: Older patients (P < 0.001), right-sided (P = 0.018), better differentiated (P = 0.003) and MSI tumors (P < 0.001) were significantly more frequent in stage II than stage III. In both groups, there was a positive association between mutated BRAF and MSI (P = 0.001) and BRAF mutation and right-sided tumors (P = 0.001). Mutations in BRAF and KRAS were mutually exclusive. In a multivariate survival analysis with pooled stage II and stage III data, BRAF mutation was an independent prognostic factor for overall survival (OS) and cancer-specific survival [hazards ratio (HR) = 0.45, 95% confidence interval (CI) 0.25-0.8 for OS and HR = 0.47, 95% CI 0.22-0.99]. KRAS mutation conferred a poorer disease-free survival (HR = 0.6, 95% CI 0.38-0.97). CONCLUSIONS: The V600E BRAF mutation confers a worse prognosis to stage II and stage III colon cancer patients independently of disease stage and therapy.

Creemers GJ

Trends in incidence, treatment and survival of gastric adenocarcinoma between 1990 and 2007: A population-based study in the Netherlands

Dassen AE, Lemmens VE, Poll-Franse LV van de, Creemers GJ*, Brenninkmeijer SJ, Lips DJ, Wurff AA vd, Bosscha K, Coebergh JW

Eur J Cancer. 2010 Apr;46(6):1101-10. Epub 2010 Mar 8

BACKGROUND: Survival of gastric cancer in the Western world remains poor. We conducted a retrospective population-based study to evaluate trends in incidence, treatment and outcome of gastric adenocarcinoma. METHODS: All patients diagnosed with gastric adenocarcinoma during 1990-2007 in the Dutch Eindhoven Cancer Registry area were included (n=4797). Trend analyses were conducted for incidence, mortality, tumour and patient characteristics, treatment and crude overall survival, according to tumour location (cardia versus non-cardia). Temporal changes in the odds of undergoing surgery and the risk of death were analysed by means of multivariable regression methods. RESULTS: Agestandardised incidence decreased among males (24-12 per 100,000 inhabitants) and females (10-6); mortality rates decreased at a similar pace. The proportion of cardia tumours remained stable. Stage distribution worsened over time among patients with cardia (stages I and II: 32% in 1990-1993 and 22% in 2006-2007, p=0.005) and non-cardia (stage IV: 33% in 1990-1993 and 40% in 2006-2007, p=0.0003) cancer. Chemotherapy rates increased in all settings. Five-year survival worsened over time for patients with non-cardia tumours. Age and stage had significant influence on survival after stratification for tumour localisation. After adjustments for relevant factors (i.e. stage), the risk of death decreased since the late 90s for patients with a cardia tumour (hazard ratio 0.8, p=0.01). CONCLUSION: The absence of improvement in survival rates indicates the need for earlier detection and prospective studies to evaluate new therapy regimens with standardised surgery and pathology.

Geerse DA

Treatment of hypophosphatemia in the intensive care unit: a review

Geerse DA*, Bindels AJ*, Kuiper MA, Roos AN*, Spronk PE, Schultz MJ.

Crit Care. 2010;14(4):R147

ABSTRACT : INTRODUCTION : Currently no evidence-based guideline exists for the approach to hypophosphatemia in critically ill patients. METHODS : We performed a narrative review of the medical literature to identify the incidence, symptoms, and treatment of hypophosphatemia in critically ill patients. Specifically, we searched for answers to the questions whether correction of hypophosphatemia is associated with improved outcome, and whether a certain treatment strategy is superior. RESULTS : Incidence: hypophosphatemia is frequently encountered in the intensive care unit; and critically ill patients are at increased risk for developing hypophosphatemia due to the presence of multiple causal factors. Symptoms: hypophosphatemia may lead to a multitude of symptoms, including cardiac and respiratory failure. Treatment: hypophosphatemia is generally corrected when it is symptomatic or severe. However, although multiple studies confirm the efficacy and safety of intravenous phosphate administration, it remains uncertain when and how to correct hypophosphatemia. Outcome: in some studies, hypophosphatemia was associated with higher mortality; a paucity of randomized controlled evidence exists for whether correction of hypophosphatemia improves the outcome in critically ill patients. CONCLUSIONS : Additional studies addressing the current approach to hypophosphatemia in critically ill patients are required. Studies should focus on the association between hypophosphatemia and morbidity and/or mortality, as well as the effect of correction of this electrolyte disorder.

Gilissen LP
Colonic stenting for malignant bowel obstruction: Cure or cause?
Moenen FC*, van den Haak A*, Gilissen LP*
Dig Liver Dis. 2010 Nov 25. [Epub ahead of print**]**

Hoorntje SJ
Renal abnormalities in a family with Alagille syndrome
Yucel H*, Hoorntje SJ,* Bravenboer B *
Neth J Med. 2010;68(1):38-39

Konings CJ
Peritoneal dialysis in patients with primary cardiac failure complicated by renal failure
Cnossen TT, Kooman JP, Konings CJ*, Uszko-Lencer NH, Leunissen KM, Sande FM vd.
Blood Purif. 2010;30(2):146-52

BACKGROUND/AIMS: Clinical outcome in cardiorenal syndrome type II and treated with peritoneal dialysis (PD). METHODS: Retrospective analysis over a period of 10 years. RESULTS: Twenty-four patients with mean age at start of dialysis of 67 ± 10 years had mean survival on dialysis of 1.03 ± 0.84 years (median survival 1.0 year). The number of hospitalizations for cardiovascular causes were reduced (13.7 ± 26.5 predialysis vs. 3.5 ± 8.8 days/patient/month postdialysis, p = 0.001). Patients who survived longer than the median survival time (n = 12) also had a reduced number of hospitalizations for all causes (3.7 ± 3.8 predialysis vs. 1.4 ± 2.1 days/patient/month postdialysis, p = 0.041), a lower age (62 ± 10 vs. 71 ± 8 years, p = 0.013) and fewer had diabetes (2 vs. 7 patients, p = 0.039), but left ventricular ejection fraction was not different. CONCLUSION: After starting PD for cardiorenal

syndrome, hospitalizations for cardiovascular causes were reduced for all patients. Survival after starting PD is highly variable. Age and diabetes seem to be significant prognostic factors, but not left ventricular ejection fraction.

Kreeftenberg H
Acceleration of the direct identification of Staphylococcus aureus versus coagulase-negative staphylococci from blood culture material: a comparison of six bacterial DNA extraction methods
Loonen AJ, Jansz AR, Kreeftenberg H*, Bruggeman CA, Wolffs PF, van den Brule AJ*
Eur J Clin Microbiol Infect Dis. 2011 Mar;30(3):337-42. Epub 2010 Oct 24

To accelerate differentiation between Staphylococcus aureus and coagulase-negative staphylococci (CNS), this study aimed to compare six different DNA extraction methods from two commonly used blood culture materials, i.e. BACTEC and BacT/ALERT. Furthermore, we analysed the effect of reduced blood culture incubation for the detection of staphylococci directly from blood culture material. A realtime polymerase chain reaction (PCR) duplex assay was used to compare the six different DNA isolation protocols on two different blood culture systems. Negative blood culture material was spiked with methicillin-resistant S. aureus (MRSA). Bacterial DNA was isolated with automated extractor easyMAG (three protocols), automated extractor MagNA Pure LC (LC Microbiology Kit M(Grade)), a manual kit MolYsis Plus and a combination of MolYsis Plus and the easyMAG. The most optimal isolation method was used to evaluate reduced bacterial incubation times. Bacterial DNA isolation with the MolYsis Plus kit in combination with the specific B protocol on the easyMAG resulted in the most sensitive detection of S. aureus, with a detection limit of 10 CFU/ml, in BacT/ALERT material, whereas using BACTEC resulted in a detection limit of 100 CFU/ml. An initial S. aureus or CNS load of 1 CFU/ml blood can be detected after 5 h of incubation in BacT/ALERT 3D by combining the sensitive isolation method and the tuf LightCycler assay.

Moenen FC
Colonic stenting for malignant bowel obstruction: Cure or cause?
Moenen FC*, van den Haak A*, Gilissen LP*
Dig Liver Dis. 2010 Nov 25. [Epub ahead of print]

Peters W
Casuistiek: Allogene trombocytengel bij urologische patiënt met een verworven trombocytopathie
Curvers J*, Koldewijn E*, Everts PAM*, Peters W*, Scharnhorst V*
Ned Tijdschr Bloedtransfusie 2010;3:94-96
Voor abstract zie: Yucel H

Roos AN
Treatment of hypophosphatemia in the intensive care unit: a review
Geerse DA*, Bindels AJ*, Kuiper MA, Roos AN*, Spronk PE, Schultz MJ
Crit Care. 2010;14(4):R147
Voor abstract zie: Geerse DA

Roos AN

Using a clinical decision support system to determine the quality of antimicrobial dosing in intensive care patients with renal insufficiency

Helmons PJ*, Grouls RJ*, Roos AN*, Bindels AJ*, Wessels-Basten SJ*, Ackerman EW*, Korsten EH*

Qual Saf Health Care 2010;19(1):22-6

Voor abstract zie: Helmons PJ

Schoon EJ

Do Basic Psychomotor Skills Transfer Between Different Image-based Procedures?

Buzink SN*, Goossens RH, Schoon EJ*, Ridder H de, Jakimowicz JJ*

World J Surg. 2010 May;34(5):933-40

Voor abstract zie: Buzink SN

Schoon EJ

Esophageal carcinoma after sleeve gastrectomy

Scheepers AF*, Schoon EJ*, Nienhuijs SW*

Surg Obes Relat Dis. 2010 Oct 30. [Epub ahead of print]

Schoon EJ

High prevalence of diabetes mellitus in patients with liver cirrhosis

Wlazlo N*, Beijers HJ*, Schoon EJ*, Sauerwein HP, Stehouwer CD, Bravenboer B*

Diabet Med. 2010 Nov;27(11):1308-11

Voor abstract zie: Wlazlo N

Wlazlo Nick

Low back pain and MRIabnormalities: atypical polymyalgia rheumatica

Nick Wlazlo*, Bert Bravenboer*, Rik Pijpers* en Maarten C. de Rijk*

Ned Tijdschr Geneeskd. 2010;154:A2300

A 64-year-old man was admitted to hospital with increasing low back pain, radiating to his upper legs. MRI of the lumbar spine showed inflammatory lesions of vertebrae L3-L5, after which the patient was treated with flucloxacilline for 6 weeks. However, he did not improve and the pain became more extensive. Finally, PET-CT study showed abnormalities in shoulders, back and hips, indicating a probable diagnosis of polymyalgia rheumatica. Upon treatment with prednisone, the pain quickly decreased and 3 months later the inflammatory changes visible on MRI were clearly reduced. Polymyalgia rheumatica (PMR) is often recognized by its typical clinical presentation, but in atypical cases, investigation using imaging may be helpful. Abnormalities in shoulder and hip joints are most common, but signs of cervical and lumbar interspinous bursitis might also be found in patients with PMR. Volgens PubMed: Ned Tijdschr Geneeskd. 2011;155(1):A2300.

Wlazlo N

Thrombophlebitis of the leg: diagnosis and treatment by the general practitioner

Timmermans SH, Wlazlo N*, Mom EM, Stoffers HE

Ned Tijdschr Geneeskd. 2010;154:A1098

We reviewed the literature for the association between superficial vein thrombosis (SVT) and venous thromboembolism (VTE) and for evidence of treatment of SVT with low-molecular-weight heparin (LMWH). There is some evidence for an association between SVT and VTE. This association seems stronger for proximal SVT as compared with distal SVT. In general practice, the absolute risk of VTE with or after SVT is low, approximately 3%. There is evidence that treatment of SVT with LMWH may have a beneficial effect on its course. NSAIDs have a similar effect. There is indirect evidence that LMWH is effective in the prevention of VTE, if the treatment is continued for more than 4 weeks. In case of a proximal SVT, we suggest an ultrasound examination be carried out and LMWH treatment given if the diagnosis is confirmed; in other cases, NSAIDs can be considered

Wlazlo N

High prevalence of diabetes mellitus in patients with liver cirrhosis

Wlazlo N*, Beijers HJ*, Schoon EJ*, Sauerwein HP, Stehouwer CD, Bravenboer B*

Diabet Med. 2010 Nov;27(11):1308-11

AIMS: The reported prevalence of Type 2 diabetes mellitus in patients with liver cirrhosis is five times higher than in the general population. However, these data were never adjusted for classical risk factors for Type 2 diabetes. We therefore investigated the association between cirrhosis and Type 2 diabetes and adjusted for known risk factors for Type 2 diabetes. METHODS: We reviewed medical files for presence of Type 2 diabetes and potential confounders in 94 patients with cirrhosis (cases) and compared these with a control group of 107 patients with non-ulcer dyspepsia. Multiple logistic regression analysis was used to adjust for potential confounders. RESULTS: The aetiology of our cirrhosis population was alcohol (59%), viral hepatitis (10%), biliary cirrhosis (3%) or cryptogenic (28%). Prevalence of Type 2 diabetes was significantly higher in patients with cirrhosis than in control subjects: 35/94 (37%) vs. 7/107 (7%) (OR 8.5, 95% CI 3.5–20.2, $P < 0.001$). After adjustment for age, sex, family history of Type 2 diabetes, alcohol use and BMI, cirrhosis remained significantly associated with Type 2 diabetes (OR 13.6, 95% CI 4.3–42.9, $P < 0.001$). Most cases of Type 2 diabetes were already diagnosed before diagnosis of cirrhosis (21/35, 60%) or were incidentally found together with cirrhosis (5/35, 14%). CONCLUSIONS: Liver cirrhosis had a strong, independent association with Type 2 diabetes. Classical risk factors such as family history and BMI could not explain the high Type 2 diabetes prevalence in cirrhosis. Therefore, a liver-derived factor might aggravate glucose intolerance and cause Type 2 diabetes in cirrhosis. In addition, Type 2 diabetes might also cause cirrhosis through liver steatosis and fibrosis.

Yucel H
Primary squamous cell carcinoma of the thyroid years after radioactive iodine treatment
Yucel H*, Schaper NC*, Beek M van*, Bravenboer B*
Neth J Med. 2010 May;68(5):224-6

Primary squamous cell carcinoma (SCC) of the thyroid gland is a rare diagnosis, since there is no squamous epithelium in the thyroid gland. SCC of the thyroid is highly aggressive with a poor prognosis. We present a case of primary SCC of the thyroid: this 88-year-old male patient had a history of hyperthyroidism which was treated with radioactive iodine 25 years earlier. Whether this treatment could be related to SCC of the thyroid is not clear. We treated our patient with thyroidectomy and subsequent intensified radiotherapy. Six months after treatment our patient is doing well and there is no sign of local reoccurrence. Our work-up is described, including the differentiation from metastatic disease. The origin of squamous cell carcinoma in the thyroid is uncertain; we discuss some theoretical considerations. We conclude that after excluding metastatic disease, thyroidectomy combined with radiotherapy is the treatment of choice.

Yucel H
Renal abonormalities in a family with Alagille syndrome
Yucel H*, Hoorntje SJ,* Bravenboer B *
Neth J Med. 2010;68(1):38-39

Hoofdstuk in boek

Creemers, GJ
Beeld van de oncologische patient: behandelingsfasen en begeleiding
Pp: 26-31
In: Jordens, Koen en Neijnens, Ingrid
Oncologie en geestelijke verzorging
Antwerpen, Apeldoorn : Garant, 2010
(Catharina-reeks, nr. 2)
ISBN 978-9-441-2678-5

** = werkzaam in het Catharina-ziekenhuis*

Kindergeneeskunde

Artikelen

Brackel HJ

Een kraamvrouw met onbegrepen koorts en een pasgeborene met een onbegrepen tachycardie: tuberculose bij moeder en kind

Lensen EJM, van Heerbeek HH, Brackel HJ*, Hasaart THM

Nederlands Tijdschrift voor Obstetrie & Gynaecologie 2010;123:165-68

Een 31-jarige zwangere beviel prematuur bij een amenorroeduur van 34 weken. Zij ontwikkelde post partum koorts zonder focus. Zij is behandeld met breedspectrum-antibiotica voor een infectie zonder focus. Twee maanden post partum presenteerde zij zich opnieuw met koorts. Een X-thorax toonde bilaterale infiltraten. Drie maanden post partum bleek het pleuravocht positief voor tuberculose. Tevens was het endometriumbiopt van tien dagen post partum ook positief voor tuberculose. Toen haar baby 4 weken oud was werd zij gediagnosticeerd met een pneumonie en tachycardie, maar longtuberculose werd pas vastgesteld nadat moeders ziekte aan het licht kwam. Moeder en kind reageerden goed op de tuberculostatica. Congenitale tuberculose is zeldzaam en wordt opgelopen in utero. Zonder therapie is de mortaliteit bij kinderen hoog; de therapie is hetzelfde als bij volwassenen.

Brackel HJ

Combination Therapy Salmeterol/Fluticasone versus Doubling Dose of Fluticasone in Children with Asthma

Vaessen-Verberne AA, Berg NJ van den, Nierop JC van, Brackel HJ*, Gerrits GP, Hop WC, Duiverman EJ; the COMBO study Group

Am J Respir Crit Care Med. 2010 Nov 15;182(10):1221-7. Epub 2010 Jul 9

RATIONALE: For children with symptomatic asthma despite low to moderate doses inhaled corticosteroids evidence is still lacking whether to add a long-acting bronchodilator or to increase the dose of inhaled corticosteroids. OBJECTIVE: To evaluate whether salmeterol/fluticasone propionate (SFP) 50/100 microg bid is non-inferior regarding symptom control in comparison with fluticasone propionate (FP) 200 microg bid Diskus((R)) in children with symptomatic asthma. METHODS: A multicentre, randomized, parallel-group, double-blind study was performed comparing SFP and FP treatment during 26 weeks on asthma control and lung function. MEASUREMENTS AND MAIN RESULTS: 158 children, 6-16 years old, still symptomatic on fluticasone propionate 100 microg bid during a 4-week runin period, were included. Percentage symptom free days during the last 10 weeks of the treatment period, did not differ between treatment groups (per protocol analysis: adjusted mean difference (FP minus SFP) 2.6%, 95%CI -8.1 to 13.4). Both groups showed substantial improvements of about 25 percent points in symptom free days (both $p<0.001$ from baseline). Lung function measurements (FEV1, FVC, PEFR and MEF50) did not differ between groups except for a slight advantage in MEF50 in the SFP group at 1 week. No differences were found between FP and SFP regarding exacerbation rates, adverse events or growth. CONCLUSIONS: In our study the efficacy on symptom control and lung function of the combination of a long-acting bronchodilator with inhaled corticosteroid is equal to doubling the dose of the inhaled corticosteroid in children still symptomatic on a moderate dose of inhaled corticosteroid.

Brackel HJ

Evaluation of interrupter resistance in methacholine challenge testing in children

Koopman M, Brackel HJ*, Vaessen-Verberne AA, Hop WC, van der Ent CK; on behalf of the COMBO_ Rint Research GroupCOMBO_Rint Research Group members are listed in the Acknowledgment Section

Pediatr Pulmonol. 2010 Nov 17 [Epub ahead of print]

Bronchial hyperresponsiveness (BHR) is a key feature of asthma and is assessed using bronchial provocation tests. The primary outcome in such tests (a 20% decrease in forced expiratory volume in 1_ sec (FEV(1))) is difficult to measure in young patients. This study evaluated the sensitivity and specificity of the interrupter resistance (R(int)) technique, which does not require active patient participation, by comparing it to the primary outcome measure.Methacholine challenge tests were performed in children with a history of moderate asthma and BHR. Mean and individual changes in R(int) and FEV(1) were studied. A receiver operating characteristic (ROC) curve was used to describe sensitivity and specificity of R(int).Seventy-three children (median age: 9.2 years; range: 6.3-13.4 years) participated. There was a significant (P_<_0.01) increase in mean R(int) with increasing methacholine doses. However, individual changes of R(int) showed large fluctuations. There was great overlap in change of R(int) between children who did and did not reach the FEV(1) endpoint. A ROC curve showed an area under the curve of 0.65.Because of low sensitivity and specificity, the use of R(int) to diagnose BHR in individual patients seems limited.

Brackel HL

Structural lung changes, lung function, and non-invasive inflammatory markers in cystic fibrosis

Robroeks CM, Roozeboom MH, de Jong PA, Tiddens HA, Jöbsis Q, Hendriks HJ, Yntema JB, Brackel HL*, van Gent R, Robben S, Dompeling E

Pediatr Allergy Immunol. 2010 May;21(3):493-500

Cystic fibrosis (CF) lung disease is characterized by chronic airway inflammation and recurrent infections, resulting in (ir)reversible structural lung changes and a progressive decline in lung function. The objective of this study was to investigate the relationship between non-invasive inflammatory markers (IM) in exhaled breath condensate (EBC), lung function indices and structural lung changes, visualized by high resolution computed tomography (HRCT) scans in CF. In 34 CF patients, lung function indices (forced expiratory volume in 1 s, forced vital capacity [FVC], residual volume, and total lung capacity [TLC]) and non-invasive IM (exhaled nitric oxide, and condensate acidity, nitrate, nitrite, 8- isoprostane, hydrogen peroxide, interferon-gamma) were assessed. HRCT scans were scored in a standardized and validated way, a composite score and component scores were calculated. In general, the correlations between non-invasive IM and structural lung changes, and between IM and lung function were low (correlation coefficients <0.40). Patients with positive sputum Pseudomonas cultures had higher EBC nitrite levels and higher parenchymal HRCT subscores than patients with Pseudomonasnegative cultures ($p < 0.05$). Multiple linear regression models demonstrated that FVC was significantly predicted by hydrogen peroxide in EBC, and the scores of bronchiectasis and mosaic perfusion

(Pearson correlation coefficient R = 0.78, p < 0.001). TLC was significantly predicted by 8-isoprostane, nitrate, hydrogen peroxide in EBC, and the mucous plugging subscore (R = 0.92, p < 0.01). Static and dynamic lung function indices in this CF group were predicted by the combination of non-invasive IM in EBC and structural lung changes on HRCT imaging. Future longitudinal studies should reveal whether non-invasive monitoring of airway inflammation in CF adds to better follow-up of patients.

Odink RJ

Een zuigeling zonder subcutaan vet: berardinelli-seip-syndroom

P. Beijer, R.J. Odink*, Th.A.M. van den Hurk, M.A.M.J. de Vroede

Tijdschrift voor Kindergeneeskunde, 2010;78(1):33-36

Een zeven dagen oude neonaat, zoon van Turkse consanguïene ouders, presenteerde zich met een opvallende afwezigheid van subcutaan vetweefsel. Hij had hepatomegalie, hyperglykemie, insulineresistentie, hypertriglyceridemie en een onmeetbaar laag leptine. De diagnose congenitale gegeneraliseerde lipodystrofie (CGL) ook berardinelli-seip-syndroom genoemd, werd gesteld. Een nieuwe mutatie in het seipine-gen werd gevonden. De behandeling bestaat uit een zeer sterk vetbeperkt dieet en bloedsuiker- verlagende medicijnen.

Odink RJ

High-dose GH treatment limited to the prepubertal period in young children with idiopathic short stature does not increase adult height

van Gool SA, Kamp GA, Odink RJ*, de Muinck Keizer-Schrama SM, Delemarre-van de Waal HA, Oostdijk W, Wit JM

Eur J Endocrinol. 2010 Apr;162(4):653-60. Epub 2010 Jan 28

OBJECTIVE: To assess the long-term effect of prepubertal high-dose GH treatment on growth in children with idiopathic short stature (ISS). DESIGN AND METHODS: Forty children with no signs of puberty, age at start 4-8 years (girls) or 4-10 years (boys), height SDS <-2.0 SDS, and birth length >-2.0 SDS, were randomly allocated to receive GH at a dose of 2 mg/m(2) per day (equivalent to 75 microg/kg per day at start and 64 microg/kg per day at stop) until the onset of puberty for at least 2 years (preceded by two 3-month periods of treatment with low or intermediate doses of GH separated by two washout periods of 3 months) or no treatment. In 28 cases, adult height (AH) was assessed at a mean (S.D.) age of 20.4 (2.3) years. RESULTS: GH-treated children (mean treatment period on high-dose GH 2.3 years (range 1.2-5.0 years)) showed an increased mean height SDS at discontinuation of the treatment compared with the controls (-1.3 (0.8) SDS versus -2.6 (0.8) SDS respectively). However, bone maturation was significantly accelerated in the GH-treated group compared with the controls (1.6 (0.4) versus 1.0 (0.2) years per year, respectively), and pubertal onset tended to advance. After an untreated interval of 3-12 years, AH was -2.1 (0.7) and -1.9 (0.6) in the GH-treated and control groups respectively. Age was a positive predictor of adult height gain. CONCLUSION: High-dose GH treatment restricted to the prepubertal period in young ISS children augments height gain during treatment, but accelerates bone maturation, resulting in a similar adult height compared with the untreated controls.

Odink RJ

Efficacy and Safety of Oxandrolone in Growth Hormone-Treated Girls with Turner Syndrome

Menke LA, Sas TC, Muinck Keizer-Schrama SM de, Zandwijken GR, Ridder MA de, Odink RJ*, Jansen M, Delemarre-van de Waal HA, Stokvis-Brantsma WH, Waelkens JJ, Westerlaken C, Reeser HM, Trotsenburg P van, Gevers EF, Buuren S van, Dejonckere PH, Hokken-Koelega AC, Otten BJ, Wit JM

J Clin Endocrinol Metab. 2010 Mar;95(3):1151-60. Epub 2010 Jan 8

Context and Objective: GH therapy increases growth and adult height in Turner syndrome (TS). The benefit to risk ratio of adding the weak androgen oxandrolone (Ox) to GH is unclear. Design and Participants: A randomized, placebo-controlled, double-blind, dose-response study was performed in 10 centers in The Netherlands. One hundred thirty-three patients with TS were included in age group 1 (2-7.99 yr), 2 (8-11.99 yr), or 3 (12-15.99 yr). Patients were treated with GH (1.33 mg/m(2) . d) from baseline, combined with placebo (Pl) or Ox in low (0.03 mg/kg . d) or conventional (0.06 mg/kg . d) dose from the age of 8 yr and estrogens from the age of 12 yr. Adult height gain (adult height minus predicted adult height) and safety parameters were systematically assessed. Results: Compared with GH+Pl, GH +Ox 0.03 increased adult height gain in the intention-to-treat analysis (mean +/- SD, 9.5 +/- 4.7 vs. 7.2 +/- 4.0 cm, P = 0.02) and per-protocol analysis (9.8 +/- 4.9 vs. 6.8 +/- 4.4 cm, P = 0.02). Partly due to accelerated bone maturation (P < 0.001), adult height gain on GH+Ox 0.06 was not significantly different from that on GH+Pl (8.3 +/- 4.7 vs. 7.2 +/- 4.0 cm, P = 0.3). Breast development was slower on GH+Ox (GH+Ox 0.03, P = 0.02; GH+Ox 0.06, P = 0.05), and more girls reported virilization on GH+Ox 0.06 than on GH+Pl (P < 0.001). Conclusions: In GH-treated girls with TS, we discourage the use of the conventional Ox dosage (0.06 mg/kg . d) because of its low benefit to risk ratio. The addition of Ox 0.03 mg/kg . d modestly increases adult height gain and has a fairly good safety profile, except for some deceleration of breast development.

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Klinisch Fysische Dienst

Artikelen

Arends AJ
FDG PET and PET/CT: EANM procedure guidelines for tumour PET imaging: version 1.0
Boellaard R, O'Doherty MJ, Weber WA, Mottaghy FM, Lonsdale MN, Stroobants SG, Oyen WJ, Kotzerke J, Hoekstra OS, Pruim J, Marsden PK, Tatsch K, Hoekstra CJ, Visser EP, Arends B*, Verzijlbergen FJ, Zijlstra JM, Comans EF, Lammertsma AA, Paans AM, Willemsen AT, Beyer T, Bockisch A, Schaefer-Prokop C, Delbeke D, Baum RP, Chiti A, Krause BJ
Eur J Nucl Med Mol Imaging. 2010 Jan;37(1):181-200

The aim of this guideline is to provide a minimum standard for the acquisition and interpretation of PET and PET/CT scans with [18F]-fluorodeoxyglucose (FDG). This guideline will therefore address general information about[18F]-fluorodeoxyglucose (FDG) positron emission tomography-computed tomography (PET/CT) and is provided to help the physician and physicist to assist to carrying out,interpret, and document quantitative FDG PET/CT examinations,but will concentrate on the optimisation of diagnostic quality and quantitative information.

Arends AJ
Opleiding en deskundigheidsgebied klinisch fysicus bij wet geregeld
Arends AJ*
Tijdschrift voor Nucleaire Geneeskunde 2010;32(1),458-61

Tijdschrift

Arends AJ
Editor in Chief:
Tijdschrift voor Nucleaire Geneeskunde 2010;32(4)

** = werkzaam in het Catharina-ziekenhuis*

Longziekten

Artikelen

Borne BE van den

Osteoporosis in COPD outpatients based on bone mineral density and vertebral fractures

Graat-Verboom L*, van den Borne BE*, Smeenk FW*, Spruit MA, Wouters EF

J Bone Miner Res. 2011 Mar;26(3):561-8. Epub 2010 sep 27

Voor abstract zie: Graat-Verboom L

Borne BE van den

Randomized Clinical Trial on the Effects of Adenosine 5'-Triphosphate Infusions on Quality of Life, Functional Status, and Fatigue in Preterminal Cancer Patients

Beijer S, Hupperets PS, Borne BE van den*, Wijckmans NE, Spreeuwenberg C, Brandt PA van den, Dagnelie PC

J Pain Symptom Manage. 2010;40(4):520-30. Epub 2010 Jul 1

CONTEXT: One potential agent to improve symptoms and quality of life (QoL) in advanced cancer patients is adenosine 5'-triphosphate (ATP). Several reports suggest that ATP may positively affect QoL and survival in patients with advanced non-small-cell lung cancer. OBJECTIVES: To investigate the effects of ATP infusions on QoL parameters in patients with preterminal cancer of mixed tumor types. METHODS: Ninety-nine preterminal cancer patients were randomly allocated to receive either ATP intravenously weekly (8-10 hours/week, with maximum 50mug/kg.minute) for eight weeks or receive no ATP (control group). QoL parameters were assessed until eight weeks and analyzed by repeatedmeasures analysis of covariance. RESULTS: Fifty-one patients were randomized to the ATP group and 48 to the control group. Unexpectedly, in the untreated control group, most of the outcome parameters did not deteriorate but remained stable or even significantly improved over time. Between the ATP and control groups, no statistically significant differences were observed for the large majority of outcome parameters, except for the strength of elbow flexor muscles in favor of the control group. CONCLUSION: ATP infusions, at the dose and schedule studied, did not have a significant effect on QoL, functional status, or fatigue in preterminal cancer patients of mixed tumor types.

Borne BE van den

Weekly chemoradiation (docetaxel/cisplatin) followed by surgery in stage III NSCLC; a multicentre phase II study

Maas KW, El Sharouni SY, Phernambucq EC, Stigt JA, Groen HJ, Herder GJ, Van Den Borne BE*, Senan S, Paul MA, Smit EF, Schramel FM

Anticancer Res. 2010 Oct;30(10):4237-43

BACKGROUND: This prospective study analyzed the feasibility and efficacy of weekly concurrent chemoradiation (docetaxel/cisplatin) followed by surgery. The primary endpoint was radiological response. PATIENTS AND METHODS: Six chemotherapy (docetaxel/cisplatin) cycles were administered on days 1, 8, 15, 22, 29 and 36 with concurrent thoracic radiotherapy in fractions of 1.8 Gy, to a total dose of 45 Gy. Patients underwent surgery depending on results of invasive mediastinal re-staging. RESULTS: Forty-two out of 45 NSCLC stage III patients were evaluable. Nineteen

patients showed partial/complete response (46%), 14 stable disease (34%) and eight (20%) progressive disease. Toxicity was mild. The 30-day postoperative mortality was 4.2%. Twenty-four patients (59%) proceeded to surgery and 20 (49%) underwent a complete resection (R0). CONCLUSION: Weekly concurrent chemoradiation (docetaxel/cisplatin) in stage III NSCLC results in a radiological response rate of 46% and mediastinal downstaging in 56%. Complete resection in downstaged patients was achieved in 49% of all patients.

Borne BE van den
Whole-Body versus Local DXA-Scan for the Diagnosis of Osteoporosis in COPD Patients
Graat-Verboom L*, Spruit MA, van den Borne BE*, Smeenk FW*, Wouters EF
J Osteoporos. 2010 Feb 7;2010:640878
Voor abstract zie: Graat-Verboom L

Borne BE van den
Implementation of endoscopic ultrasound for lung cancer staging
Jouke T. Annema, Roman Bohoslavsky, Sjaak Burgers, Marianne Smits, Babs Taal, Ben Venmans, Hans Nabers, Ben van den Borne, Roland van Balkom, tjeerd Haitjema, Alle Welling, Gerald Staaks, Olaf M. Dekkers, Harm van Tinteren, Klaus F. Rabe
Gastrointest Endosc. 2010 Jan;71(1):64-70, 70.e1

BACKGROUND: EUS-guided FNA is currently advocated in lung cancer staging guidelines as an alternative for surgical staging to prove mediastinal metastases. To date, training requirements for chest physicians to obtain competency in EUS for lung cancer staging are unknown. OBJECTIVE: To test a training and implementation strategy for EUS for the diagnosis and staging of lung cancer. DESIGN: Prospective national multicenter implementation trial. Nine (chest) physicians from 5 hospitals participated in a dedicated EUS educational program (investigation of 50 patients) for the diagnosis and staging of lung cancer. EUS outcomes of trainees were compared with those of the training center. SETTING: Four general hospitals, the national cancer center (implementation centers), and a tertiary referral center (expert center). PATIENTS: This study involved 551 consecutive patients with (suspected) lung cancer, all candidates for surgical staging, who underwent EUS in 1 of the 5 implementation centers (n = 346) or the single expert center (n = 205). Surgical-pathological staging was the reference standard in case no mediastinal metastases were found. RESULTS: EUS had a sensitivity of 83% versus 82% and accuracy of 89% versus 88% for mediastinal nodal staging (implementation center vs expert center). Surgery was spared because of EUS findings in 51% versus 54% of patients. A single complication occurred in each group. LIMITATION: Surgical-pathological verification of mediastinal nodes was not available in all patients staged negative at EUS. CONCLUSION: Chest physicians who participate in a dedicated training and implementation program for EUS in lung cancer staging can obtain results similar to those of experts for mediastinal nodal staging.

Borne BE van den

Observation of the treatment and outcomes of patients receiving chemotherapy for advanced NSCLC in Europe (ACTION study)

Helge G. Bischoff, Ben van den Borne*, Francisco L. Pimentel, Jorge Arellano, Heather Anderson, Frank Langer, Monika I. Leschinger, Nicholas Thatcher

Current Medical Research & Opinion, 2010;26(6):1461-70

OBJECTIVE: The ACTION (Assessment of Cost and ouTcomes of chemotherapy In an Observational setting) study investigated associations between chemotherapy, patient/disease characteristics and outcomes in advanced non-small cell lung cancer (NSCLC) patients in clinical practice. RESEARCH DESIGN AND METHODS: Chemonaïve NSCLC patients from five European countries were observed for 18 months from initiation of first-line chemotherapy; care was at the physician's discretion. MAIN OUTCOME MEASURES: Survival and associated prognostic factors were estimated using Kaplan-Meier methods and a Cox proportional hazards model, respectively. Cluster analyses of baseline patient characteristics were also performed. Toxicity data were not considered in these analyses. RESULTS: A total of 975 eligible patients with NSCLC (Stage IIIb/IV) were enrolled and provided baseline and response data; cluster analysis was performed on 829 patients and survival data were available from 906 patients. In first-line treatment, a 39.8% response rate, a 39.5% 1-year survival rate and unadjusted median survival of 9.3 months were observed. Prognostic factors for survival included performance status (PS), number of metastatic organs, gender and age. Five patient clusters were identified, highlighting patient heterogeneity in terms of baseline condition and age. PS was maintained or improved throughout first-line and second-line chemotherapy in half the patients receiving these treatments. CONCLUSIONS: ACTION provides valuable information about patient population, disease characteristics, treatment choices, prescribing patterns and outcomes in routine clinical practice in advanced NSCLC in Europe. Our findings suggest that maintenance of PS after first and subsequent lines of chemotherapy, and survival rates may both be higher than previously anticipated. Our results also showed an association between age and survival, which suggests that age should not exclude patients from receiving chemotherapy if they meet all other eligibility criteria.

Graat-Verboom L

Osteoporosis in COPD outpatients based on bone mineral density and vertebral fractures

Graat-Verboom L*, van den Borne BE*, Smeenk FW*, Spruit MA, Wouters EF

J Bone Miner Res. 2011 Mar;26(3):561-8. Epub 2010 sep 27

One of the extrapulmonary effects of chronic obstructive pulmonary disease (COPD) is osteoporosis. Osteoporosis is characterized by a low bone mineral density (BMD) and microarchitectural deterioration. Most studies in COPD patients use dual energy absorptiometry (DXA) scan only to determine osteoporosis, therefore microarchitectural changes without a low BMD are missed.Aim of the current study was to determine the prevalence and correlates of osteoporosis in COPD patients based on DXAscan, X-ray of the spine (X-spine) and the combination thereof.DXA-scan, X-spine, pulmonary function testing, body composition, 6-minutes walking distance, medical history and medication use were assessed in 255 clinically stable

COPD outpatients of a large teaching hospital in the Netherlands.Half of all patients had radiological evidence for osteoporosis. Combining the results of DXA-scans with X-spine augmented the proportion of COPD patients with osteoporosis compared to both methods separately. The prevalence of osteoporosis was not significantly different after stratification for GOLD-stage. Most patients with osteoporosis did not receive pharmacological treatment. Age, body mass index (BMI) and parathormone (PTH) were significant independent correlates for osteoporosis.Chest physicians should be aware of the high prevalence of osteoporosis in COPD even in case of a low GOLD score. Especially in elder COPD patients with a low BMI and/or an increased PTH.

Graat-Verboom L

Whole-Body versus Local DXA-Scan for the Diagnosis of Osteoporosis in COPD Patients

Graat-Verboom L*, Spruit MA, van den Borne BE*, Smeenk FW*, Wouters EF

J Osteoporos. 2010 Feb 7;2010:640878.

Background. Osteoporosis is an extrapulmonary effect of chronic obstructive pulmonary disease (COPD). Diagnosis of osteoporosis is based on BMD measured by DXA-scan. The best location for BMD measurement in COPD has not been determined. Aim of this study was to assess whole-body BMD and BMD of the hip and lumbar spine (local DXA) in COPD patients and compare the prevalence of osteoporosis at these locations. Methods. Whole body as well as local DXA-scan were made in 168 COPD patients entering pulmonary rehabilitation. Patient-relevant characteristics were assessed. Prevalence of osteoporosis was determined. Characteristics of patients without osteoporosis were compared to patients with osteoporosis on local DXA. Results. A higher prevalence of osteoporosis was found using local DXA compared to whole-body DXA (39% versus 21%). One quarter of patients without osteoporosis on whole body-DXA did have osteoporosis on local DXA. Significant differences in patient characteristics between patients without osteoporosis based on both DXA measurements and patients with osteoporosis based on local DXA only were found. Conclusions. DXA of the hip and lumbar spine should be made to assess bone mineral density in COPD patients. The lowest T-score of these locations should be used to diagnose osteoporosis.

Janssen A

Effectiveness and cost-effectiveness of early assisted discharge for chronic obstructive pulmonary disease exacerbations: the design of a randomised controlled trial

Utens CM*, Goossens LM, Smeenk FW*, van Schayck OC, van Litsenburg W*, Janssen A*, van Vliet M, Seezink W, Demunck DR, van de Pas B, de Bruijn PJ, van der Pouw A, Retera JM, de Laat-Bierings P, van Eijsden L, Braken M, Eijsermans R, Rutten-van Mölken MP

BMC Public Health. 2010 Oct 18;10:618

Voor abstract zie: Utens CM

Litsenburg W van

Effectiveness and cost-effectiveness of early assisted discharge for chronic obstructive pulmonary disease exacerbations: the design of a randomised controlled trial

Utens CM*, Goossens LM, Smeenk FW*, van Schayck OC, van Litsenburg W*, Janssen A*, van Vliet M, Seezink W, Demunck DR, van de Pas B, de Bruijn PJ, van der Pouw A, Retera JM, de Laat-Bierings P, van Eijsden L, Braken M, Eijsermans R, Rutten-van Mölken MP

BMC Public Health. 2010 Oct 18;10:618

Voor abstract zie: Utens CM

Smeenk FW

Effectiveness and cost-effectiveness of early assisted discharge for chronic obstructive pulmonary disease exacerbations: the design of a randomised controlled trial

Utens CM*, Goossens LM, Smeenk FW*, van Schayck OC, van Litsenburg W*, Janssen A*, van Vliet M, Seezink W, Demunck DR, van de Pas B, de Bruijn PJ, van der Pouw A, Retera JM, de Laat-Bierings P, van Eijsden L, Braken M, Eijsermans R, Rutten-van Mölken MP

BMC Public Health. 2010 Oct 18;10:618

Voor abstract zie: Utens CM

Smeenk FW

Osteoporosis in COPD outpatients based on bone mineral density and vertebral fractures

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J Bone Miner Res. 2011 Mar;26(3):561-8. Epub 2010 sep 27

Voor abstract zie: Graat-Verboom L

Smeenk FW

Whole-Body versus Local DXA-Scan for the Diagnosis of Osteoporosis in COPD Patients

Graat-Verboom L*, Spruit MA, van den Borne BE*, Smeenk FW*, Wouters EF

J Osteoporos. 2010 Feb 7;2010:640878

Voor abstract zie: Graat-Verboom L

Utens CM

Effectiveness and cost-effectiveness of early assisted discharge for chronic obstructive pulmonary disease exacerbations: the design of a randomised controlled trial

Utens CM*, Goossens LM, Smeenk FW*, van Schayck OC, van Litsenburg W*, Janssen A*, van Vliet M, Seezink W, Demunck DR, van de Pas B, de Bruijn PJ, van der Pouw A, Retera JM, de Laat-Bierings P, van Eijsden L, Braken M, Eijsermans R, Rutten-van Mölken MP

BMC Public Health. 2010 Oct 18;10:618

BACKGROUND: Exacerbations of chronic obstructive pulmonary disease (COPD) are the main cause for hospitalisation. These hospitalisations result in a high pressure on

hospital beds and high health care costs. Because of the increasing prevalence of COPD this will only become worse. Hospital at home is one of the alternatives that has been proved to be a safe alternative for hospitalisation in COPD. Most schemes are early assisted discharge schemes with specialised respiratory nurses providing care at home. Whether this type of service is cost-effective depends on the setting in which it is delivered and the way in which it is organised. METHODS/DESIGN: GO AHEAD (Assessment Of Going Home under Early Assisted Discharge) is a 3- months, randomised controlled, multi-centre clinical trial. Patients admitted to hospital for a COPD exacerbation are either discharged on the fourth day of admission and further treated at home, or receive usual inpatient hospital care. Home treatment is supervised by general nurses. Primary outcome is the effectiveness and cost effectiveness of an early assisted discharge intervention in comparison with usual inpatient hospital care for patients hospitalised with a COPD exacerbation. Secondary outcomes include effects on quality of life, primary informal caregiver burden and patient and primary caregiver satisfaction. Additionally, a discrete choice experiment is performed to provide insight in patient and informal caregiver preferences for different treatment characteristics. Measurements are performed on the first day of admission and 3 days, 7 days, 1 month and 3 months thereafter. Ethical approval has been obtained and the study has been registered. DISCUSSION: This article describes the study protocol of the GO AHEAD study. Early assisted discharge could be an effective and cost-effective method to reduce length of hospital stay in the Netherlands which is beneficial for patients and society. If effectiveness and cost-effectiveness can be proven, implementation in the Dutch health care system should be considered.

Hoofdstuk in boek

Smeenk FW
Seizoensgebonden kortademigheid
Youssef-El Soud M , Smeenk FW
Pp 61-8
In: Probleem georienteerd denken in de longgeneeskunde. Ed. SM de Hosson, MJ Tjip, WJG van Putten, TS van der Werf
Enschede : De Tijdstroom, 2010
ISBN: 9789058981769

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Multi Disciplinaire Oncologie

Hoofdstuk in boek

Nelissen P
Patient centraal in de (organisatie van) oncologische zorg
Pp. 15-25
Jordens K, Neijnens I
Oncologie en geestelijke verzorging (Catharina-reeks, nr. 2)
Antwerpen, Apeldoorn : Garant, 2010
ISBN 978-9-441-2678-5

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Neurologie

Artikelen

Bouwman FH

Diagnostic Impact of CSF Biomarkers in a Local Hospital Memory Clinic

Kester MI, Boelaarts L, Bouwman FH, Vogels RL, Groot ER, Elk EJ van, Blankenstein MA, Flier WM van der, Scheltens P

Dement Geriatr Cogn Disord. 2010 Jun 3;29(6):491-97

Background: CSF biomarkers amyloid-beta 1-42 (Abeta42), total tau (tau) and tau phosphorylated at threonine 181 (ptau-181) are useful diagnostic markers for Alzheimer's disease (AD). We examined the impact of these biomarkers in the diagnostic process in a non-academic memory clinic. Methods: One hundred and nine patients with available CSF were included from the local hospital memory clinic. Initially, patients were clinically diagnosed, and the clinician indicated their confidence in the diagnosis. Next the CSF results were presented, and the clinician re-evaluated his initial diagnosis. The main outcomes were changes in initial diagnosis and diagnostic confidence. Results: Forty-seven patients were initially diagnosed with AD, 26 were diagnosed with another type of dementia, 18 were diagnosed with mild cognitive impairment, and 18 received a non-dementia diagnosis. All biomarkers distinguished between AD and non-dementia ($p < 0.01$); tau and ptau-181 also distinguished AD from other types of dementia ($p < 0.001$). After CSF biomarker levels were revealed, 11 diagnoses changed. In 31% of the diagnoses, the clinician gained confidence, while in 10% confidence decreased. Conclusion: We found that knowledge of CSF biomarker profiles changed the diagnosis in 10% of the cases, and confidence in the diagnosis increased for one third of the patients.

Keizer K

Meningoencephalitis caused by varicella zoster virus

Weerkamp NJ, Keizer K*, Boel CH, Rijk MC de*

Ned Tijdschr Geneeskd. 2010;154(11):A1575

Varicella zoster virus (VZV) belongs to the group of herpes viruses. It can cause a number of nervous system infections. We present 2 of 4 patients seen recently suffering from acute meningoencephalitis, in which VZV proved to be the infectious agent. The first patient was a 57-year-old woman with headache, vomiting, and sudden aggressiveness. The second patient was a 60-year-old man with headache, nausea, and vomiting. Neither patient had skin eruptions usually associated with VZV reactivation, nor had either recently suffered from herpes zoster. Both patients had in their cerebrospinal fluid a lymphocytic pleocytosis, a decreased glucose concentration and and an elevated protein concentration. The patients recovered within a few days of starting intravenous treatment with aciclovir 10 mg/kg 3 times daily for one week. Recent literature shows that VZV is a common pathogen in meningoencephalitis and is probably underestimated as a putative cause of this condition. VZV meningoencephalitis usually has a mild course, but serious complications have been reported. Patients present with headache and usually fever. Nuchal rigidity and meningeal irritation are not always present. Since the advent of the PCR technique, VZV has been readily demonstrable. Anti-viral treatment is

advised despite the lack of placebo-controlled studies, and may be combined with prednisone.

Rijk MC de
Distinguishing acute-onset CIDP from fluctuating Guillain-Barre syndrome: a prospective study
Ruts L, Drenthen J, Jacobs BC, van Doorn PA; Dutch GBS Study Group
Neurology. 2010 May 25;74(21):1680-6

OBJECTIVE: The aim of the study was to provide criteria that can help to distinguish between GBS-TRF and A-CIDP in the early phase of disease. BACKGROUND: The distinction between Guillain-Barré syndrome (GBS) with fluctuations shortly after start of treatment (treatment-related fluctuations, or GBS-TRF) and chronic inflammatory demyelinating polyneuropathy with acute onset (A-CIDP) is difficult but important because prognosis and treatment strategy largely differ. METHODS: Patients with GBS (n = 170) were included in a prospective longitudinal study. Patients with GBS-TRF (n = 16) and patients with A-CIDP (n = 8) were analyzed and compared. Extended clinical data, biologic material, and electrophysiologic data were collected during 1 year follow-up. RESULTS: The first TRF in the GBS-TRF group always occurred within 8 weeks (median 18 days; range 10-54 days) from onset of weakness. In the GBS-TRF group, 5 (31%) patients had a second TRF and none had more TRFs. At all timepoints, patients in the A-CIDP group were less severely affected than patients with GBS-TRF, did not need artificial ventilation, rarely had cranial nerve dysfunction, and tended to have more CIDP-like electrophysiologic abnormalities. More GBS-TRF patients were severely affected and more patients had sensory disturbances when compared to the GBS group without fluctuations. CONCLUSIONS: The diagnosis of acute-onset chronic inflammatory demyelinating polyneuropathy (CIDP) should be considered when a patient thought to have Guillain-Barré syndrome deteriorates again after 8 weeks from onset or when deterioration occurs 3 times or more. Especially when the patient remains able to walk independently and has no cranial nerve dysfunction or electrophysiologic features likely to be compatible with CIDP, maintenance treatment for CIDP should be considered.

Rijk MC de
Pain in Guillain-Barre syndrome: a long-term follow-up study
Ruts L, Drenthen J, Jongen JL, Hop WC, Visser GH, Jacobs BC, van Doorn PA; Dutch GBS Study Group
Neurology. 2010 Oct 19;75(16):1439-47

BACKGROUND: Pain in Guillain-Barré syndrome (GBS) may be pronounced and is often overlooked. OBJECTIVES: To obtain detailed information about pain in GBS and its clinical variants. METHODS: This was a prospective cohort study in 156 patients with GBS (including 18 patients with Miller Fisher syndrome [MFS]). We assessed the location, type, and intensity of pain using questionnaires at standard time points during a 1-year follow-up. Pain data were compared to other clinical features and serology. RESULTS: Pain was reported in the 2 weeks preceding weakness in 36% of patients, 66% reported pain in the acute phase (first 3 weeks after inclusion), and 38% reported pain after 1 year. In the majority of patients, the intensity of pain was

moderate to severe. Longitudinal analysis showed high mean pain intensity scores during the entire follow-up. Pain occurred in the whole spectrum of GBS. The mean pain intensity was predominantly high in patients with GBS (non-MFS), patients with sensory disturbances, and severely affected patients. Only during later stages of disease, severity of weakness and disability were significantly correlated with intensity of pain. CONCLUSIONS: Pain is a common and often severe symptom in the whole spectrum of GBS (including MFS, mildly affected, and pure motor patients). As it frequently occurs as the first symptom, but may even last for at least 1 year, pain in GBS requires full attention. It is likely that sensory nerve fiber involvement results in more severe pain.

Rijk MC de
Meningoencephalitis caused by varicella zoster virus
Weerkamp NJ, Keizer K*, Boel CH, Rijk MC de*
Ned Tijdschr Geneeskd. 2010;154(11):A1575
Voor abstract zie: Keizer K

Rijk, MC de
Low back pain and MRIabnormalities: atypical polymyalgia rheumatica.
Nick Wlazlo, Bert Bravenboer, Rik Pijpers en Maarten C. de Rijk
Ned Tijdsch Geneesk. 2010;154:A2300
Voor abstract zie: Wlazlo N

** = werkzaam in het Catharina-ziekenhuis*

Nucleaire geneeskunde

Artikelen

Pijpers R
Lage rugpijn en MRI-afwijkingen: atypische polymyalgia rheumatica
Nick Wlazlo, Bert Bravenboer, Rik Pijpers en Maarten C. de Rijk
Ned Tijdsch Geneesk. 2010;154:A2300
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Onderwijs & Onderzoek

Artikelen

Broek KC van den

Emotional distress in partners of patients with an implantable cardioverter defibrillator: a systematic review and recommendations for future research

Van Den Broek KC, Habibović M, Pedersen SS

Pacing Clin Electrophysiol. 2010 Dec;33(12):1442-50

Both patients with an implantable cardioverter defibrillator (ICD) and their partners face challenges when adapting to the ICD. Distress is a burden on its own for partners but may also affect well being and health of patients. This review provides a systematic overview of the literature on psychological distress in partners of ICD patients and recommendations for future research. PubMed and PsycInfo were searched in March 2010 using a priori defined search terms. This search and the additional hand search resulted in 22 studies, of which 13 were quantitative and eight qualitative. Sample sizes in quantitative studies varied considerably from 10 to 196 partners, with only six of 13 studies including >50 partners. Partner levels of distress were at least on par with patient levels. The majority of large-scale studies suggested that partner distress levels decrease in the first year postimplantation. Most studies reported no impact of ICD shocks on distress levels or quality of life in partners. ICD indication as well as comorbid conditions, age, and the psychological profile of the partner were related to distress and quality of life. Domains of concern emerging from qualitative studies were related to care of the ICD patient, helplessness and uncertainties related to shocks, role changes, sexual activities, overprotectiveness, and driving. Partner levels of distress may be as high as that of ICD patients. Research with large samples is needed to further investigate the course and determinants of partner distress and the influence that partner distress may have on patient health outcomes

Broek KC van den

Pre-implantation implantable cardioverter defibrillator concerns and Type D personality increase the risk of mortality in patients with an implantable cardioverter defibrillator

Pedersen SS, van den Broek KC, Erdman RA, Jordaens L, Theuns DA

Europace. 2010 Oct;12(10):1446-52. Epub 2010 Aug 18

AIMS: Little is known about the influence of psychological factors on prognosis in implantable cardioverter defibrillator (ICD) patients. We examined the influence of the distressed personality (Type D) and pre-implantation device concerns on short-term mortality in ICD patients. METHODS AND RESULTS: Consecutively implanted ICD patients (N = 371; 79.5% men) completed the Type D Scale and the ICD Patient Concerns questionnaire prior to implantation and were followed up for short-term mortality. The prevalence of Type D was 22.4%, whereas 34.2% had high levels of ICD concerns. The incidence of mortality was higher in Type D vs. non-Type D patients [13.3% vs. 4.92%; hazard ratio (HR): 2.74; 95% confidence interval (CI): 1.24-6.03] and in patients with high vs. low levels of ICD concerns (11.0% vs. 4.5%; HR: 2.38; 95% CI: 1.08-5.23). Type D personality (HR: 2.79; 95% CI: 1.25-6.21) and high levels of ICD concerns (HR: 2.38; 95% CI: 1.06-5.34) remained independent predictors of mortality in separate analyses, adjusting for sex, age, ICD

indication, coronary artery disease, and shocks. Patients with clustering of both Type D personality and high levels of preimplantation concerns (HR: 3.86; 95% CI: 1.64-9.10) had a poorer survival compared with patients with one or none of these risk markers in adjusted analysis. Shocks during the follow-up period were also associated with mortality (HR: 3.09; 95% CI: 1.36-7.04). CONCLUSION: Patients with a distressed personality and high levels of pre-implantation device-related concerns had a poorer prognosis, independent of other risk markers including shocks. This subgroup of patients should be identified in clinical practice and would likely benefit from a combined distress management programme and cardiac rehabilitation.

Broek KC van den

Shock as a determinant of poor patient-centered outcomes in implantable cardioverter defibrillator patients: is there more to it than meets the eye

Pedersen SS, Van Den Broek KC, Van Den Berg M, Theuns DA

Pacing Clin Electrophysiol. 2010 Dec;33(12):1430-6

The medical benefits of the implantable cardioverter defibrillator (ICD) are well established, but ICD shocks are known to influence patient-centered outcomes. In this viewpoint, we examine the strength of the evidence as found in primary and secondary prevention trials that used quality of life as an outcome, and compare the influence of ICD shock with other factors (e.g., heart failure and psychological factors) as determinants of outcomes, with a view to providing recommendations for clinical practice and future research. Based on the large-scale primary and secondary prevention trials (i.e., CABG-PATCH, CIDS, AVID, AMIOVIRT, SCD-HeFT, MADIT-II, and DEFINITE), evidence for an association between ICD shocks and quality of life is mixed, with some indication that the influence of shocks may depend largely on the interval between shocks and assessment of quality of life. In order to improve the clinical management of ICD patients, we need to adopt a more rigorous and standardized methodology in future studies in order to be able to draw firm conclusions about the impact of ICD shocks on individual patients. We also need to acknowledge that the impact of shocks on psychological functioning and quality of life may not be as straightforward as previously assumed. Given that programming of the ICD is changing, leading to fewer shocks and improved quality of life, it may be timely to also examine the influence of other determinants (e.g., heart failure progression and the patient's psychological profile) of patient-centered outcomes both in research and in clinical practice.

Broek KC van den

The distressed (Type D) personality in both patients and partners enhances the risk of emotional distress in patients with an implantable cardioverter defibrillator

van den Broek KC*, Versteeg H, Erdman RA, Pedersen SS

J Affect Disord. 2010 Nov 17.[Epub ahead of print]

BACKGROUND: A subgroup of patients with an implantable cardioverter defibrillator (ICD) experiences emotional distress. This may be related to partner factors. We examined the impact of the personality of the partner (i.e., the distressed (Type D)

personality) in combination with that of the patient on anxiety and depression levels in ICD patients. METHODS: Consecutively implanted ICD patients (N=281; 80.1% men; mean age=58.3±11.0) and their partners (N=281; 20.6% men; mean age=56.5±11.7) completed the Type D Scale at baseline; patients also completed the Hospital Anxiety and Depression Scale at baseline and 6months post-implantation. RESULTS: ANOVA for repeated measures, using the Type D main effects and the interaction effect, showed that the interaction time by Type D patient by Type D partner was significant (F((1,277))=7.0, p=.009) for depression as outcome, but not for anxiety (F((1,277))=3.1, p=.08). Post-hoc comparisons revealed that Type D patients with a Type D partner (n=23/281, 8.2%) experienced the highest depression levels compared to other personality combinations (all ps<.05). LIMITATIONS: The group of Type D patients with a Type D partner was rather small. CONCLUSIONS: ICD patients with a Type D personality report more depressive symptoms, but not anxiety, if the partner also has a Type D personality. This may be due to poor communication and lack of emotional support in the relationship. These results emphasize the importance of taking into account the psychological profile of the partner in the management and care of the ICD patient, and to direct behavioural support not only at the ICD patient but also at the partner.

Dierick-van Daele AT

Economic evaluation of nurse practitioners versus GPs in treating common conditions

Dierick-van Daele AT*, Steuten LM, Metsemakers JF, Derckx EW, Spreeuwenberg C, Vrijhoef HJ

Br J Gen Pract. 2010;60(570):e28-35

BACKGROUND: As studies evaluating substitution of care have revealed only limited evidence on costeffectiveness, a trial was conducted to evaluate nurse practitioners as a first point of contact in Dutch general practices. AIM: To estimate costs of GP versus nurse practitioner consultations from practice and societal perspectives. DESIGN OF STUDY: An economic evaluation was conducted alongside a randomised controlled trial between May and October 2006, wherein 12 nurse practitioners and 50 GPs working in 15 general practices (study practices) participated. Consultations by study practices were also compared with an external reference group, with 17 GPs working in five general practices without the involvement of nurse practitioners. METHOD: Direct costs within the healthcare sector included resource use, follow-up consultations, length of consultations, and salary costs. Costs outside the healthcare sector were productivity losses. Sensitivity analyses were performed. RESULTS: Direct costs were lower for nurse practitioner consultations than for GP consultations at study practices. This was also the case for direct costs plus costs from a societal perspective for patients aged <65 years. Direct costs of consultations at study practices were lower than those of reference practices, while practices did not differ for direct costs plus costs from a societal perspective for patients aged <65 years. Cost differences are mainly caused by the differences in salary. CONCLUSION: By involving nurse practitioners, substantial economic 'savings' could be used for redesigning primary care, to optimise the best skill mix, and to cover the full range of primary care activities.

Dierick-van Daele AT

The value of nurse practitioners in Dutch general practices

Dierick-van Daele AT, Spreeuwenberg C, Derckx EW, van Leeuwen Y, Toemen T, Legius M, Janssen JJ, Metsemakers JF, Vrijhoef HJ

Qual Prim Care. 2010;18(4):231-41

BACKGROUND: Healthcare systems are faced with a changing and increasing demand for care. Against the background of the need to increase service capacity and to improve access to primary care, a project was initiated to introduce the nurse practitioner (NP) role into Dutch general practices. OBJECTIVE: To explore the value of the NP by describing NP roles and their concordance with the initial concepts of the NP training programme. METHODS: An observational longitudinal design, using mixed methods, was conducted between March 2004 and June 2008. A convenience sample of seven NPs and seven teaching general practitioners (GPs), together constituting seven experimental groups, was used. Project documentation and data from consultations between NPs and GPs were collected. Twenty-nine interviews were performed, focusing on NP roles, competencies of NPs and collaboration between professionals. RESULTS: As was anticipated, all NPs have patients with common complaints as their main focus, as well as managing the quality of care projects. Differences between NPs are reported in the percentages of time spent in performing home visits, caring for older people, patient related activities and non-patient related activities. CONCLUSION: NPs contribute to the accessibility and availability of primary care as well as to collaboration in and quality of primary care. The roles they adopt are influenced by practice needs and financial incentives. It is not clear to what degree NPs have to perform activities to improve quality of care and further research is necessary to define NP core competencies.

Martens EJ

Analysis of Pitfalls Encountered by Residents in Transurethral Procedures in Master-Apprentice Type of Training

Schout BM*, Persoon MC*, Martens EJ,* Bemelmans BL, Scherpbier AJ, Hendrikx AJ*

J Endourol. 2010 Apr;24(4):621-8. [Epub ehead of print]

Voor abstract zie: Schout BM

Martens EJ

Effect of body mass index on early and late mortality after coronary artery bypass grafting

Straten AH van*, Bramer S*, Soliman Hamad MA*, Zundert AA van*, Martens EJ*, Schönberger JP*, Wolf AM de

Ann Thorac Surg. 2010;89(1):30-7

Voor abstract zie: Straten AH van

Martens EJ
Effect of duration of red blood cell storage on early and late mortality after coronary artery bypass grafting
Straten AH van*, Soliman Hamad MA*, Zundert AA*, Martens EJ*, Woorst JF*, Wolf AM, Scharnhorst V*
J Thorac Cardiovasc Surg. 2011 Jan;141(1):231-7. Epub 2010 Jul 9
Voor abstract zie: Straten AH van

Martens EJ
Effect of storage time of transfused plasma on early and late mortality after coronary artery bypass grafting
Straten AH van*, Soliman Hamad MA*, Martens EJ*, Tan ME*, de Wolf AM, Scharnhorst V*, van Zundert AA*
J Thorac Cardiovasc Surg. 2010 Sep 18. [Epub ahead of print]
Voor abstract zie: Straten AH van

Martens EJ
Evaluation of the EuroSCORE risk scoring model for patients undergoing coronary artery bypass graft surgery: a word of caution
Straten AH van *, Tan EM*, Hamad MA*, Martens EJ*, Zundert AA van*
Neth Heart J. 2010 Aug;18(7-8):355-9
Voor abstract zie: Straten AH van

Martens EJ
Peripheral Vascular Disease as a Predictor of Survival After Coronary Artery Bypass Grafting: Comparison With a Matched General Population
Straten AH van*, Firanescu C*, Soliman Hamad MA*, Tan ME, Woorst JF ter*, Martens EJ*, Zundert AA van*
Ann Thorac Surg. 2010;89(2):414-20
Voor abstract zie: Straten AH van

Martens EJ
Preoperative Atrial Fibrillation and Elevated C-Reactive Protein Levels as Predictors of Mediastinitis After Coronary Artery Bypass Grafting
Elenbaas TW*, Soliman Hamad MA*, Schönberger JP*, Martens EJ*, Zundert AA van*, Straten AH van*
Ann Thorac Surg. 2010;89(3):704-9
Voor abstract zie: Elenbaas TW

Martens EJ
Preoperative ejection fraction as a predictor of survival after coronary artery bypass grafting: comparison with a matched general population
Soliman Hamad MA*, Straten AH van*, Schonberger JP*, Woorst JF ter*, Wolf AM de*,Martens EJ*, Zundert AA van*
J Cardiothorac Surg. 2010 Apr 23;5(1):29
Voor abstract zie: Soliman Hamad MA

Martens EJ

The Impact of New-Onset Postoperative Atrial Fibrillation on Mortality After Coronary Artery Bypass Grafting

Bramer S*, Straten AH van*, Soliman Hamad MA*, Berreklouw E*, Martens EJ*, Maessen JG

Ann Thorac Surg. 2010 Aug;90(2):443-9

Voor abstract zie: Bramer S

Martens EJ

The impact of preoperative atrial fibrillation on early and late mortality after coronary artery bypass grafting

Bramer S*, Straten AH van*, Soliman Hamad MA*, Berreklouw E*, Martens EJ*, Maessen JG

Eur J Cardiothorac Surg. 2010 Sep;38(3):373-9. Epub 2010 Apr 3

Voor abstract zie: Bramer S

Martens EJ

Thrombocytopenia after aortic valve replacement: comparison between mechanical and biological valves

Straten AH van, Hamad MA, Berreklouw E*, Woorst JF ter*, Martens EJ*, Tan ME

J Heart Valve Dis. 2010 May;19(3):394-9

Voor abstract zie: Bramer S

Martens EJ

Virtual reality laparoscopic nephrectomy simulator is lacking in construct validity

Wijn RP*, Persoon MC*, Schout BM*, Martens EJ*, Scherpbier AJ, Hendrikx AJ*

J Endourol. 2010;24(1):117-22

Voor abstract zie: Bramer S

Martens EJ

A Simulator for Teaching Transrectal Ultrasound Procedures: How Useful and Realistic Is It?

Persoon, MC*, Schout, BM*, Martens, EJ*; Tjiam, IM, Tielbeek, AV*, Scherpbier, AJ, Witjes, JA,Hendrikx, AJ*

Simulation in Healthcare: The Journal of the Society for Simulation in Healthcare. 2010; 5(5):311-314

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Orthopedie

Artikelen

Erp A van
Platelet leukocyte gel facilitates bone substitute growth and autologous bone growth in a goat model
Everts PA*, Delawi D, Mahoney CB, Erp A van*, Overdevest EP*, Zundert A van,* Knape JT, Dhert WJ
J Biomed Mater Res A. 2010:92(2):746-53
Voor abstract zie: Everts PA

Meermans G
Is there a role for tissue biopsy in the diagnosis of periprosthetic infection?
Meermans G, Haddad FS
Clin Orthop Relat Res. 2010 May;468(5):1410-7. Epub 2010 Feb 4
BACKGROUND: Successful treatment of an infected joint arthroplasty depends on correctly identifying the responsible pathogens. The value of a preoperative biopsy remains controversial. QUESTIONS/PURPOSES: We (1) compared the sensitivity and specificity of both tests separately and in combination, and (2) asked whether the combination of tissue biopsy and aspiration would improve our diagnostic yield in the evaluation of periprosthetic joint infections. PATIENTS AND METHODS: We prospectively followed 120 patients with suspected infection of a total joint arthroplasty: 64 with THAs and 56 with TKAs. All patients had aspiration with culture and biopsy. RESULTS: The sensitivity was 83% for aspiration, 79% for biopsy, and 90% for the combination of both techniques. The specificity was 100% for aspiration and biopsy and the combination. The overall accuracy was 84%, 81%, and 90%, respectively. CONCLUSIONS: Our data suggest tissue biopsy alone offers no clear advantage over joint aspiration. However, the combination of both techniques provides improved sensitivity and accuracy. We recommend the use of tissue biopsy as an adjunct to joint aspiration in the diagnosis of total joint infection.

Meermans G
Long-term outcome after meniscal repair
Tengrootenhuysen M, Meermans G*, Pittoors K*, van Riet R, Victor J
Knee Surg Sports Traumatol Arthrosc. 2011 Feb;19(2):236-41. Epub 2010 Oct 15
PURPOSE: The purpose of this study was to analyse the clinical and radiological results of meniscal repairs and identify factors that correlate with the success of this procedure. METHODS: A retrospective review of 119 meniscal repairs was completed. The average follow-up was 70 months. Successful meniscal repairs were observed critically in terms of radiographic changes and clinical outcomes and compared with failed meniscal repairs. RESULTS: The overall success rate of meniscal repairs was 74%. Meniscal repairs that were performed within 6 weeks of injury had better results (83%) than late repairs (52%). The best results were obtained with the inside-out technique using #0 PDS suture (80%) compared to all-inside Biofix arrows (70%) and combined repairs (63%). Patients with associated ACL injury had a better chance of a successful outcome, but this was only significant when the ACL was reconstructed at the time of repair ($P < 0.05$). Those patients who had failed meniscal repair had increased radiographic osteoarthritic changes

(81%) on long-term follow-up compared to patients with successful repair (14%). CONCLUSION: This retrospective study shows the clinical and radiological importance of meniscal repair. Successful results in this study were associated with younger age and earlier repair using insideout technique. Furthermore, increased success was seen in meniscal repairs performed in association with ACL reconstruction.

Meermans G

Preoperative digital templating of Birmingham hip resurfacing

Konan S, Rayan F, Meermans G, Geurts J, Haddad FS

Hip Int. 2010 Jan-Mar;20(1):14-7

The aim of our study was to determine the usefulness of preoperative digital templating of Birmingham hip resurfacing (BHR). This prospective cohort of 30 consecutive Birmingham hip resurfacings was templated digitally by two senior hip arthroplasty fellows (GM, JG) independently. A blinded observer then collated information on the actual implant sizes intraoperatively and used this to statistically analyse the correlation (Interclass correlation coefficient) between the digitally templated implant sizes and the actual implant sizes used. A significantly high rate of coincidence between digitally templated estimates and the actual implant sizes was noted for both groups of templates. The Intra class correlation coefficient (ICC) for the acetabular cup in the two groups were 0.798, p=0.013 and 0.870, p=0.0001. For the femoral component, the ICC values in the two groups were 0.888, p=0.005 and 0.784, p=0.003. Similarly a high reliability of digital templating was noted for both acetabular (0.823, 0.888) and femoral components (0.777, 0.8132). In conclusion, digital templating can reliably estimate implant sizes in Birmingham hip resurfacing.

Meermans G

Preoperative Radiographic Assessment of Limb-length Discrepancy in Total Hip Arthroplasty

Meermans G, Malik A, Witt J, Haddad F

Clin Orthop Relat Res. 2010 Sep 29. [Epub ahead of print]

BACKGROUND: Pelvic radiographs are helpful in assessing limb-length discrepancy (LLD) before and after THA but are subject to variation. Different methods are used to determine LLDs. As a pelvic reference, both ischial tuberosities and the teardrops are used, and as a femoral reference, the lesser trochanter and center of the femoral head are used. QUESTIONS/PURPOSES: We validated the different methods for preoperative radiographic measurement of LLDs and evaluated their reliability. PATIENTS AND METHODS: LLDs were measured on full-leg radiographs for 52 patients (29 men, 23 women) with osteoarthritis (OA) of the hip and compared with different methods for measuring LLDs on AP radiographs of the pelvis. RESULTS: The true LLD varied from -8.0 to 9.1 mm. When the biischial line was used as a pelvic reference, the LLD measured on AP pelvis radiographs was different from the true LLD. No difference was found when the interteardrop line was used as a pelvic reference. There was substantial interobserver agreement when the lesser trochanter was used as a femoral reference (kappa = 0.66 -0.70) and excellent interobserver and intraobserver agreement for all other measurements (kappa = 0.84-0.93). CONCLUSIONS: Our data show use of the biischial line as a pelvic reference should be discouraged and the interteardrop line is a better alternative. The center of the

femoral head is a more reliable femoral landmark compared with the lesser trochanter. LEVEL OF EVIDENCE: Level I, diagnostic study. See Guidelines for Authors for a complete description of levels of evidence.

Pittoors K
Long-term outcome after meniscal repair
Tengrootenhuysen M, Meermans G*, Pittoors K*, van Riet R, Victor J
Knee Surg Sports Traumatol Arthrosc. 2011 Feb;19(2):236-41. Epub 2010 Oct 15
Voor abstract zie: Meermans G

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Plastische Chirurgie

Artikelen

Beets MR
Treatment options for mallet finger: a review
Smit JM*, Beets MR*, Zeebregts CJ, Rood A, Welters CF
Plast Reconstr Surg. 2010 Nov;126(5):1624-9
Voor abstract zie: Smit JM

Hoogbergen MM
Malrotation of the McGhan Style 510 Prosthesis
Schots JM, Fechner MR, Hoogbergen MM*, Tits HW van
Plast Reconstr Surg. 2010 Jul;126(1):261-5

BACKGROUND:: Anatomically shaped cohesive silicone breast implants are frequently used in aesthetic and reconstructive surgery. After successful results with the Style 410 prosthesis, McGhan (Natrelle, Allergan) introduced the Style 510 prosthesis. After using this novel prosthesis, the authors encountered a high number of prosthesis malrotations on self-reported follow-up. Therefore, a retrospective medical record review was performed to determine the prevalence of malrotation of the Style 510 prosthesis. METHODS:: From January of 2005 to December of 2006, 73 (146 prostheses) aesthetic augmentation mammaplasty procedures were performed using Style 510 prostheses. All prostheses were placed subglandularly through an inframammary incision. The postsurgical protocol for the first 3 weeks involved wearing a nonwired compression bra, abstinence from sports activities, and abstinence from heavy labor. Standard follow-up was at 1 week, 3 months, and if necessary. RESULTS:: On selfreported follow-up, 8.2 percent of all prostheses were rotated. These rotations all occurred unilaterally after a mean period of 10 months (range, 3 to 19 months). No relation to an inciting incident or prosthesis volume could be found. CONCLUSIONS:: The number of rotations of the Style 510 prosthesis seen after primary aesthetic breast augmentation is high. An obvious cause of this major problem has not been found. This led the authors to discontinue using the Style 510 prosthesis for primary aesthetic mammary augmentations in their practice.

Hoogbergen MM
Management of tattoos in the operative field
Smit JM*, Scheele K*, Lapid O, Hoogbergen MM*
Ann Plast Surg. 2010; 64(1):125-7
Voor abstract zie: Smit JM

Scheele K
Management of tattoos in the operative field
Smit JM*, Scheele K*, Lapid O, Hoogbergen MM*
Ann Plast Surg. 2010; 64(1):125-7
Voor abstract zie: Smit JM

Smit JM

A clinical review of 9 years of free perforator flap breast reconstructions: an analysis of 675 flaps and the influence of new techniques on clinical practice

Acosta R, Smit JM*, Audolfsson T, Darcy CM, Enajat M, Kildal M, Liss AG

J Reconstr Microsurg. 2011 Feb;27(2):91-8. Epub 2010 Nov 2

The aim of this study is to review our 9-year experience with deep inferior epigastric perforator (DIEP) breast reconstructions to help others more easily overcome the pitfalls we experienced. A chart review was conducted for all 543 patients who had 622 DIEP breast reconstructions in our clinic between January 2000 and January 2009. In this time, there were an additional 28 superior gluteal artery perforator and 25 superficial inferior epigastric artery reconstructions, bringing the total free flap reconstructions to 675. In the early years, the success rate was 90.7%, the average operative time was 7 hours and 18 minutes, and the complication rate was 33.3%; these have improved to 98.2%, 4 hours and 8 minutes, and 19.3%, respectively. We describe our selection criteria, preoperative vascular mapping, surgical techniques, and postoperative monitoring as they relate to these improvements in outcome, operative time, and complications. The DIEP flap is a safe and reliable option in breast reconstructions. By acquiring experience with the flap and introducing new and improving existing techniques we have improved the ease of the procedure and the success rate and have shortened the operative time.

Smit JM

A single center comparison of one versus two venous anastomoses in 564 consecutive DIEP flaps: investigating the effect on venous congestion and flap survival

Enajat M, Rozen WM, Whitaker IS, Smit JM*, Acosta R

Microsurgery. 2010;30(3):185-91

BACKGROUND: Venous complications have been reported as the more frequently encountered vascular complications seen in the transfer of deep inferior epigastric artery (DIEA) perforator (DIEP) flaps, with a variety of techniques described for augmenting the venous drainage of these flaps to minimize venous congestion. The benefits of such techniques have not been shown to be of clinical benefit on a large scale due to the small number of cases in published series. METHODS: A retrospective study of 564 consecutive DIEP flaps at a single institution was undertaken, comparing the prospective use of one venous anastomosis (273 cases) to two anastomoses (291 cases). The secondary donor vein comprised a second DIEA venae commitante in 7.9% of cases and a superficial inferior epigastric vein (SIEV) in 92.1%. Clinical outcomes were assessed, in particular rates of venous congestion. RESULTS: The use of two venous anastomoses resulted in a significant reduction in the number of cases of venous congestion to zero (0 vs. 7, P = 0.006). All other outcomes were similar between groups. Notably, the use of a secondary vein did not result in any significant increase in operative time (385 minutes vs. 383 minutes, P = 0.57). CONCLUSIONS: The use of a secondary vein in the drainage of a DIEP flap can significantly reduce the incidence of venous congestion, with no detriment to complication rates. Consideration of incorporating both the superficial and deep venous systems is an approach that may further improve the venous drainage of the flap.

Smit JM

Advancements in free flap monitoring in the last decade: a critical review

Smit JM*, Zeebregts CJ, Acosta R, Werker PM

Plast Reconstr Surg. 2010 Jan;125(1):177-85

Comment in: Plast Reconstr Surg. 2010 Aug;126(2):679; author reply 679-80

BACKGROUND: The authors conducted a review of the recent literature on the monitoring of free flaps to create an overview of the current monitoring devices and their potential as an ideal monitoring method. METHODS: A literature-based study was conducted using the PubMed and Cochrane databases. The following search terms were used: "flap" and "monitoring." All monitoring methods found between January of 1999 and January of 2009 were evaluated. Monitoring methods that were described in five or more clinical reports were further investigated. RESULTS: The advantages and disadvantages of conventional monitoring methods, the implantable Doppler system, color duplex sonography, near-infrared spectroscopy, microdialysis, and laser Doppler flowmetry are presented. Furthermore, an overview is given of their potential as ideal monitoring method. CONCLUSIONS: The implantable Doppler system, near-infrared spectroscopy, and laser Doppler flowmetry appear to be the best monitoring devices currently available. As most of the publications on monitoring have focused on the reliability of the systems, future research should also address their cost efficiency.

Smit JM

An overview of methods for vascular mapping in the planning of free flaps

Smit JM*, Klein S, Werker PM

J Plast Reconstr Aesthet Surg. 2010 Sep;63(9):e674-82. Epub 2010 Jul 31

INTRODUCTION: The aim of this overview is to describe the various methods for vascular mapping of flaps together with their advantages and drawbacks. MATERIALS AND METHODS: The PubMed database was used. Relevant search terms included 'flap' in combination with 'hand-held Doppler' (HHD), 'colour duplex sonography' (CDS), 'digital subtraction angiography' (DSA), 'computed tomography angiography' (CTA) and 'magnetic resonance angiography' (MRA). All studies found between January 2000 and January 2010 was evaluated. RESULTS: A total of 72 articles were found. Of these, 62 were usable for this overview. Recommendations could not be found for all types of flaps. Therefore, no uniform guidelines can be provided; some findings are, however, unequivocal. In general, HHD is cheap and easy to use, but relatively unreliable in determining the exact site of emergence at fascia level of perforators. CTA and MRA provide the best three-dimensional images. CTA offers more detailed images, MRA has the advantage however of not using radiation. CDS can be of value to offer information about the amount of flow in vessels or in cases in which CTA or MRA are contraindicated. DSA appears to be fading out slowly. CONCLUSION: CTA and MRA are currently the best methods available to map the vasculature of donor sites of perforator flaps with variable anatomy such as anterolateral thigh (ALT) and deep inferior epigastric perforator (DIEP). In flaps with standard anatomy and superficial vasculature, HHD or no mapping at all remains the method of choice.

Smit JM

Hemangioma in the newborn: increased incidence after chorionic villus sampling

Bauland CG, Smit JM*, Bartelink LR, Zondervan HA, Spauwen PH

Prenat Diagn. 2010 Oct;30(10):913-7

OBJECTIVES: This study was designed to compare the effects of transcervical chorionic villus sampling (CVS) and amniocentesis on the prevalence of hemangiomas of infancy. METHODS: This is a cohort study of 250 consecutive assessable transabdominal amniocentesis procedures and 250 consecutive assessable transcervical CVS procedures performed between January and September 2002. Parents were asked to fill out a questionnaire regarding the presence of any type of skin lesions. Based on the responses to the questionnaire, children were invited to undergo a physical examination to confirm hemangiomas. RESULTS: Questionnaires were returned in 78% of the CVS group (195/250) and in 72% of the amniocentesis group (180/250). Based on the responses in the questionnaire, 78 children in the CVS group and 42 in the amniocentesis group underwent a physical examination. One or more hemangiomas were present in 53 of 195 (27.2%) children in the CVS group versus 17 of 180 (9.4%) children in the amniocentesis group (odds ratio 3.6, 95% CI: 2.0-6.5). There was no difference in congenital abnormalities between the two groups. CONCLUSION: Transcervical CVS is associated with a significantly increased prevalence of hemangiomas compared with amniocentesis. The clinical features of these hemangiomas do not differ from natural hemangiomas and complications of these hemangiomas are very rare.

Smit JM

Introduction of the implantable Doppler system did not lead to an increased salvage rate of compromised flaps: a multivariate analysis

Smit JM*, Werker PM, Liss AG, Enajat M, de Bock GH, Audolfsson T, Acosta R

Plast Reconstr Surg. 2010 Jun;125(6):1710-7

Comment in: Plast Reconstr Surg. 2010 Jun;125(6):1718-9

BACKGROUND: The Cook-Swartz implantable Doppler system was introduced at the Uppsala University Hospital to ease free flap monitoring and improve salvage rates by an earlier detection of vascular compromise. The aim of the current analysis was to investigate whether the system indeed improved the salvage rate of revisions. METHODS: All cases that needed revision among a consecutive series of patients being monitored with the implantable Doppler system between June of 2006 and January of 2009 were compared with a similar set of patients operated on before the introduction of the implantable Doppler system over an equal time span monitored with conventional methods. Data were extracted from the medical files of the patients. Logistic regression was used to identify factors associated with the outcome of the revision. Values of $p < 0.05$ were considered statistically significant. RESULTS: A total of 327 flaps were monitored with the implantable Doppler system, of which 35 needed revision. In the control group, 303 flaps were included, of which 40 needed revision. The revision was successful in 69 percent of the cases in the implantable Doppler system group; in the group monitored by only conventional methods, this rate was 60 percent. Univariate analysis showed no statistical difference between these success rates ($p = 0.441$; odds ratio, 1.455; 95 percent

confidence interval, 0.560 to 3.775). Multivariate analysis did not show a statistical difference either (p = 0.799; odds ratio, 1.143; 95 percent confidence interval, 0.410 to 3.182). CONCLUSION: The introduction of the implantable Doppler system did not lead to a significant increase in the salvage rate of revised flaps.

Smit JM

Management of tattoos in the operative field

Smit JM*, Scheele K*, Lapid O, Hoogbergen MM*

Ann Plast Surg. 2010;64(1):125-7

Tattooing is increasingly common in Western society. The aim of the study was to create an overview of the surgical options when a tattoo is present in the operative site and to present an algorithm for the surgical plan.A literature-based study was conducted, using the Pubmed database. The following search terms have been used: "tattoo" in combination with "incision," "scar," and "surgery." Apart from the literature, we also used our own clinical experience with the tattoos.An overview is presented on the different options when a tattoo is at risk because of a surgical intervention. An algorithm is presented to help surgeons to choose the best option before the operation.By realizing that a tattoo can be of great value to a patient and by using surgical skills to preserve the tattoo as much as possible, it becomes possible to increase patient satisfaction in these difficult cases.

Smit JM

Performing two DIEP flaps in a working day: an achievable and reproducible practice

Acosta R, Enajat M, Rozen WM, Smit JM*, Wagstaff MJ, Whitaker IS, Audolfsson T

J Plast Reconstr Aesthet Surg. 2010 Apr;63(4):648-54

BACKGROUND: While the deep inferior epigastric artery perforator (DIEP) flap is a reliable technique for autologous breast reconstruction, the meticulous dissection of perforators may require lengthy operative times. In our unit, we have performed 600 free flaps for breast reconstruction over 8 years and have reduced operative times with a combination of preoperative computed tomographic angiography (CTA), various anastomotic techniques and the Cook-Swartz implantable Doppler probe for perfusion monitoring. We sought to assess the feasibility of performing two DIEP flaps within the working hours of a single day. METHODS: A review of 101 consecutive patients undergoing DIEP flap breast reconstruction in a 12- month period was performed, comparing one DIEP flap per day (n=43) to two DIEP flaps per day (n=58). Complications, outcomes and techniques used were critically analysed. For cases of two DIEP flaps per day, a comparison was made between the use of two separate operating theatres (n=44) and a single consecutive theatre (n=14). RESULTS: Complications did not increase when two DIEP flaps were performed in a single working day. The use of vascular closure staple (VCS) sutures and ring couplers resulted in statistically significant reductions in anastomotic times. The use of two separate theatres for performing two DIEP flaps resulted in a reduction of 59min in operative time per case (p=0.004). CONCLUSION: Two DIEP flaps can be safely and routinely performed within the hours of a single working day. By minimising operative times, these techniques can improve productivity and substantially decrease surgeon fatigue.

Smit JM

Surgical technique: The intercostal space approach to the internal mammary vessels in 463 microvascular breast reconstructions

Darcy CM, Smit JM*, Audolfsson T, Acosta R

J Plast Reconstr Aesthet Surg. 2011 Jan;64(1):58-62. Epub 2010 Jun 12

The internal mammary vessels are one of the most frequently used recipient sites for microsurgical freeflap breast reconstruction, and an accepted technique to expose these vessels involves removal of a segment of costal cartilage of the rib. However, in some patients, cartilage removal may result in a visible medial chest-wall depression that requires corrective procedures. We, therefore, use an intercostal space approach to the internal mammary vessels, as there is minimal disturbance of the costal cartilage with this technique. We have developed and performed our technique over an 8-year period in 463 microvascular breast reconstructions, and present it here as it contains modifications not previously described that may be of interest to other surgeons. There was no serious morbidity associated with the intercostal space approach, the internal mammary vessels were reliably and safely exposed in all these cases and the flap success rate was 95.8%.

Smit JM

The deep inferior epigastric artery perforator flap for autologous reconstruction of large partial mastectomy defects

Enajat M, Rozen WM, Whitaker IS, Smit JM*, Van Der Hulst RR, Acosta R

Microsurgery. 2011 Jan;31(1):12-7. Epub 2010 Dec 6

BACKGROUND: Breast conservation surgery in the treatment of early stage breast cancer has become increasingly utilized as a means to avoiding mastectomy. While partial mastectomy defects (PMDs) may often be cosmetically acceptable, some cases warrant consideration of reconstructive options, and while several reconstructive options have been described in this role, a series of deep inferior epigastric perforator (DIEP) flaps has not been reported to date. METHODS: A cohort of 18 patients undergoing PMD reconstruction with a DIEP flap were included. Patient-specific data, operation details, cosmetic results, and complication rates were assessed. Oncologic outcomes, in particular recurrence rates, were also evaluated. RESULTS: In our series there were no cases of partial or total flap necrosis, and overall complications were low. There were two cases of wound infection (both had undergone radiotherapy), managed conservatively, and one case of reoperation due to hematoma. There were no cancer recurrences or effect on oncologic management. Cosmetic outcome was rated as high by both patients and surgeon. The results were thus comparable with other reconstructive options. CONCLUSION: Although autologous reconstruction has an established complication rate, our results suggest that the DIEP flap may be of considerable value for delayed reconstruction of selected larger partial mastectomy defects.

Smit JM

Treatment options for mallet finger: a review

Smit JM*, Beets MR*, Zeebregts CJ, Rood A, Welters CF

Plast Reconstr Surg. 2010 Nov;126(5):1624-9

BACKGROUND: Mallet finger is a common injury. The aim of this review is to give an overview of the different treatment options of mallet injuries and their indications, outcomes, and potential complications. METHODS: A literature-based study was conducted using the PubMed database comprising world literature from January of 1980 until January of 2010. The following search terms were used: "mallet" and "finger." RESULTS: There are many variations in the design of splints; there are, however, only a few studies that compare the type of splints with one another. Splinting appears to be effective in uncomplicated and complicated cases. Equal results have been reported for early and delayed splinting therapy. To internally fixate a mallet finger, many different techniques have been reported; however, none of these studies examined their comparisons in a controlled setting. In chronic mallet injuries, a tenodermodesis followed by splinting or a tenotomy of the central slip is usually performed. If pain and impairment persist despite previous surgical corrective attempts, an arthrodesis of the distal interphalangeal joint should be performed. CONCLUSIONS: Uncomplicated cases of mallet injuries are best treated by splinting therapy; cases that do not react to splinting therapy are best treated by surgical interventions. Controversy remains about whether mallet injuries with a larger dislocated bone fragment are best treated by surgery or by external splinting.

** = werkzaam in het Catharina-ziekenhuis*

Radiologie

Artikelen

Daniels-Gooszen AW

Absence of tumor invasion into pelvic structures in locally recurrent rectal cancer: prediction with preoperative MR imaging

Dresen RC, Kusters M*, Daniels-Gooszen AW*, Cappendijk VC, Nieuwenhuijzen GA*, Kessels AG, Bruïne AP de, Beets GL, Rutten HJ*, Beets-Tan RG

Radiology. 2010 Jul;256(1):143-50

Voor abstract zie: Kusters M

Duijm LE

More breast cancer death in 2008: stepping up prevention

Voogd AC, Duijm LE*, Coebergh JW*

Ned Tijdschr Geneeskd. 2010;154(6): A1550

According to data of Statistics Netherlands the number of women dying from breast cancer has risen from 3180 in 2007 to 3327 in 2008 (+5%). The increase was largest for women aged 60-69 years (+16%) and was rather unexpected, as breast cancer mortality had decreased by 25-30% in the Netherlands since 1995, despite the rapid increase in breast cancer incidence during the same period. Does this mean that the limits of earlier diagnosis by screening and more effective treatment have now been reached? Specific action to increase the quality and breast cancer detection rate of the current breast cancer screening program and wider use of chemotherapy, hormonal treatment, targeted therapy and their combinations will probably not be enough to compensate for the continuing increase in breast cancer incidence. Unquestionably, lowering the exposure to modifiable risk factors is the most effective strategy to reduce breast cancer mortality in the long run. These risk factors are the relatively old age when having a first child, a short period of breast feeding or absence of breast feeding, being overweight, little physical exercise and increased alcohol consumption.

Haak A van den

Colonic stenting for malignant bowel obstruction: Cure or cause?

Moenen FC*, van den Haak A*, Gilissen LP*

Dig Liver Dis. 2010 Nov 25. [Epub ahead of print]

Jansen FH

Localization of non-palpable breast cancer using a radiolabelled titanium seed

Riet YE van*, Jansen FH*, Beek M van*, Velde CJ vd, Rutten HJ*, Nieuwenhuijzen GA*

Br J Surg. 2010 May 20;97(8):1240-45. Epub 2010 May 20

Voor abstract zie: Riet YE van

Jansen FH

Percutaneous vertebroplasty is not a risk factor for new osteoporotic compression fractures: results from VERTOS II

Klazen CA, Venmans A, de Vries J, van Rooij WJ, Jansen FH*, Blonk MC*, Lohle PN, Juttmann JR, Buskens E, van Everdingen KJ, Muller A, Fransen H, Elgersma OE, Mali WP, Verhaar HJ

AJNR Am J Neuroradiol. 2010 Sep;31(8):1447-50

BACKGROUND AND PURPOSE: PV is increasingly used as treatment for osteoporotic VCFs. However, controversy exists as to whether PV increases the risk for new VCFs during follow-up. The purpose of our research was to assess the incidence of new VCFs in patients with acute VCFs randomized to PV and conservative therapy. MATERIALS AND METHODS: VERTOS II is a prospective multicenter randomized controlled trial comparing PV with conservative therapy in 202 patients. Incidence, distribution, and timing of new VCFs during follow-up were assessed from spine radiographs. In addition, further height loss during follow-up of treated VCFs was measured. RESULTS: After a mean follow-up of 11.4 months (median, 12.0; range, 1-24 months), 18 new VCFs occurred in 15 of 91 patients after PV and 30 new VCFs in 21 of 85 patients after conservative therapy. This difference was not significant (P = .44). There was no higher fracture risk for adjacent-versusdistant vertebrae. Mean time to new VCF was 16.2 months after PV and 17.8 months after conservative treatment (logrank, P = .45). The baseline number of VCFs was the only risk factor for occurrence (OR, 1.43; 95% CI, 1.05-1.95) and number (P = .01) of new VCFs. After conservative therapy, further height loss of treated vertebrae occurred more frequently (35 of 85 versus 11 of 91 patients, P < .001) and was more severe (P < .001) than after PV. CONCLUSIONS: Incidence of new VCFs was not different after PV compared with conservative therapy after a mean of 11.4 months' follow-up. The only risk factor for new VCFs was the number of VCFs at baseline. PV contributed to preservation of stature by decreasing both the incidence and severity of further height loss in treated vertebrae.

Jansen FH

Vertebroplasty versus conservative treatment in acute osteoporotic vertebral compression fractures (Vertos II): an open-label randomised trial

Klazen CA, Lohle PN, de Vries J, Jansen FH*, Tielbeek AV*, Blonk MC*, Venmans A, van Rooij WJ, Schoemaker MC, Juttmann JR, Lo TH, Verhaar HJ, van der Graaf Y, van Everdingen KJ, Muller AF, Elgersma OE, Halkema DR, Fransen H, Janssens X, Buskens E, Mali WP

Lancet. 2010 Sep 25;376(9746):1085-92, Epub 2010 Aug 9. Comment in: Lancet. 2010 Sep 25;376(9746):1031-3

BACKGROUND: Percutaneous vertebroplasty is increasingly used for treatment of pain in patients with osteoporotic vertebral compression fractures, but the efficacy, cost-effectiveness, and safety of the procedure remain uncertain. We aimed to clarify whether vertebroplasty has additional value compared with optimum pain treatment in patients with acute vertebral fractures. METHODS: Patients were recruited to this open-label prospective randomised trial from the radiology departments of six hospitals in the Netherlands and Belgium. Patients were aged 50 years or older, had vertebral compression fractures on spine radiograph (minimum 15% height loss;

level of fracture at Th5 or lower; bone oedema on MRI), with back pain for 6 weeks or less, and a visual analogue scale (VAS) score of 5 or more. Patients were randomly allocated to percutaneous vertebroplasty or conservative treatment by computer-generated randomisation codes with a block size of six. Masking was not possible for participants, physicians, and outcome assessors. The primary outcome was pain relief at 1 month and 1 year as measured by VAS score. Analysis was by intention to treat. This study is registered at ClinicalTrials.gov, number NCT00232466. FINDINGS: Between Oct 1, 2005, and June 30, 2008, we identified 431 patients who were eligible for randomisation. 229 (53%) patients had spontaneous pain relief during assessment, and 202 patients with persistent pain were randomly allocated to treatment (101 vertebroplasty, 101 conservative treatment). Vertebroplasty resulted in greater pain relief than did conservative treatment; difference in mean VAS score between baseline and 1 month was -5·2 (95% CI -5·88 to -4·72) after vertebroplasty and -2·7 (-3·22 to -1·98) after conservative treatment, and between baseline and 1 year was -5·7 (-6·22 to -4·98) after vertebroplasty and -3·7 (-4·35 to -3·05) after conservative treatment. The difference between groups in reduction of mean VAS score from baseline was 2·6 (95% CI 1·74-3·37, p<0·0001) at 1 month and 2·0 (1·13-2·80, p<0·0001) at 1 year. No serious complications or adverse events were reported. INTERPRETATION: In a subgroup of patients with acute osteoporotic vertebral compression fractures and persistent pain, percutaneous vertebroplasty is effective and safe. Pain relief after vertebroplasty is immediate, is sustained for at least a year, and is significantly greater than that achieved with conservative treatment, at an acceptable cost.

Tielbeek AV
Effort thrombosis of the subclavian vein
Yo LS*, Lauret GJ*, Tielbeek A*, Teijink J*
Ned Tijdschr Geneeskd. 2010;154(47):A2197
Voor abstract zie: Yo LS

Tielbeek AV
Vertebroplasty versus conservative treatment in acute osteoporotic vertebral compression fractures (Vertos II): an open-label randomised trial
Klazen CA, Lohle PN, de Vries J, Jansen FH*, Tielbeek AV*, Blonk MC*, Venmans A, van Rooij WJ, Schoemaker MC, Juttmann JR, Lo TH, Verhaar HJ, van der Graaf Y, van Everdingen KJ, Muller AF, Elgersma OE, Halkema DR, Fransen H, Janssens X, Buskens E, Mali WP
Lancet. 2010 Sep 25;376(9746):1085-92. Epub 2010 Aug 9
Voor abstract zie: Jansen FH

Tielbeek AV

A Simulator for Teaching Transrectal Ultrasound Procedures: How Useful and Realistic Is It?

Persoon, MC*, Schout, BM*, Martens, EJ*; Tjiam, IM, Tielbeek, AV*, Scherpbier, AJ, Witjes, JA,Hendrikx, AJ*

Simulation in Healthcare: The Journal of the Society for Simulation in Healthcare, 2010; 5(5):311-314

Voor abstract zie: Persoon MC

Yo LS

Effort thrombosis of the subclavian vein

Yo LS*, Lauret GJ*, Tielbeek A*, Teijink J*

Ned Tijdschr Geneeskd. 2010;154(47):A2197

Three patients, 2 women aged 42 and 20 years and a 21-year-old man, presented with painful swelling of the upper extremity. The symptoms developed after activities involving repetitive, excessive use of the upper extremity. Duplex examination and venography showed thrombosis of the subclavian vein. This specific type of thrombosis is known as effort thrombosis or Paget-von Schroetter syndrome. It results from a narrowed thoracic outlet combined with repetitive strenuous use of the upper extremity. All three patients were first treated with thrombolytic therapy using urokinase delivered locally in the thrombus with a catheter. After the thrombus had resolved, a first rib resection was performed to decompress the thoracic outlet. Due to the remaining substantial stenosis and vessel wall irregularity, additional percutaneous transluminal angioplasty was performed. It is important to treat effort thrombosis immediately and adequately. Otherwise, it may lead to a postthrombotic syndrome, which can be severely disabling.

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Radiotherapie

Artikelen

Heumen MJ van
Quality Assurance of 4D-CT Scan Techniques in Multicenter Phase III Trial of Surgery Versus Stereotactic Radiotherapy (Radiosurgery Or Surgery for operable Early stage (Stage 1A) non-small-cell Lung cancer [ROSEL] Study)
Hurkmans CW*, van Lieshout M*, Schuring D*, van Heumen MJ*, Cuijpers JP, Lagerwaard FJ, Widder J, van der Heide UA, Senan S
Int J Radiat Oncol Biol Phys. 2010 Oct 13. [Epub ahead of print]
Voor abstract zie: Hurkmans CW

Hurkmans CW
Consideration of Dose Limits for Organs at Risk of Thoracic Radiotherapy: Atlas for Lung, Proximal Bronchial Tree, Esophagus, Spinal Cord, Ribs, and Brachial Plexus
Kong FM, Ritter T, Quint DJ, Senan S, Gaspar LE, Komaki RU, Hurkmans CW*, Timmerman R, Bezjak A, Bradley JD, Movsas B, Marsh L, Okunieff P, Choy H, Curran WJ Jr
Int J Radiat Oncol Biol Phys. 2010 Oct 7. [Epub ahead of print]

Hurkmans CW
European organisation for research and treatment of cancer recommendations for planning and delivery of high-dose, high-precision radiotherapy for lung cancer
De Ruysscher D, Faivre-Finn C, Nestle U, Hurkmans CW*, Le Péchoux C, Price A, Senan S
J Clin Oncol. 2010 Dec 20;28(36):5301-10. Epub 2010 Nov 15

PURPOSE To derive recommendations for routine practice and clinical trials for techniques used in highdose, high-precision thoracic radiotherapy for lung cancer. METHODS A literature search was performed to identify published articles considered both clinically relevant and practical to use. Recommendations were categorized under the following headings: patient selection, patient positioning and immobilization, tumor motion, computed tomography and [(18)F]fluorodeoxyglucose-positron emission technology scanning, generating target volumes, radiotherapy treatment planning, treatment delivery, and scoring of response and toxicity. The American College of Chest Physicians grading of recommendations was used. Results Recommendations were identified for each of the recommendation categories. Although most of the recommended techniques have not been evaluated in multicenter clinical trials, their use in high-precision thoracic radiotherapy and stereotactic body radiotherapy (SBRT) appears to be justified on the basis of available evidence. CONCLUSION Recommendations to facilitate the clinical implementation of high-precision conformal radiotherapy and SBRT for lung tumors were identified from the literature. Some techniques that are considered investigational at present were also highlighted.

Hurkmans CW

Quality Assurance of 4D-CT Scan Techniques in Multicenter Phase III Trial of Surgery Versus Stereotactic Radiotherapy (Radiosurgery Or Surgery for operable Early stage (Stage 1A) non-small-cell Lung cancer [ROSEL] Study)

Hurkmans CW*, van Lieshout M*, Schuring D*, van Heumen MJ*, Cuijpers JP, Lagerwaard FJ, Widder J, van der Heide UA, Senan S

Int J Radiat Oncol Biol Phys. 2010 Oct 13. [Epub ahead of print]

PURPOSE: To determine the accuracy of four-dimensional computed tomography (4D-CT) scanning techniques in institutions participating in a Phase III trial of surgery vs. stereotactic radiotherapy (SBRT) for lung cancer. METHODS AND MATERIALS: All 9 centers performed a 4D-CT scan of a motion phantom (Quasar, Modus Medical Devices) in accordance with their in-house imaging protocol for SBRT. A cylindrical cedar wood insert with plastic spheres of 15 mm (ø15) and 30 mm (ø30) diameter was moved in a cosine-based pattern, with an extended period in the exhale position to mimic the actual breathing motion. A range of motion of R = 15 and R = 25 mm and breathing period of T = 3 and T = 6 s were used. Positional and volumetric imaging accuracy was analyzed using Pinnacle version 8.1× at various breathing phases, including the mid-ventilation phase and maximal intensity projections of the spheres. RESULTS: Imaging using eight CT scanners (Philips, Siemens, GE) and one positron emission tomography-CT scanner (Institution 3, Siemens) was investigated. The imaging protocols varied widely among the institutions. No strong correlation was found between the specific scan protocol parameters and the observed results. Deviations in the maximal intensity projection volumes averaged 1.9% (starting phase of the breathing cycle [ø]15, R = 15), 12.3% (ø15, R = 25), and -0.9% (ø30, R = 15). The end-expiration volume deviations (13.4%, ø15 and 2.5%, ø30), were, on average, smaller than the endinspiration deviations (20.7%, ø15 and 4.5%, ø30), which, in turn, were smaller than the mid-ventilation deviations (32.6%, ø15 and 8.0%, ø30). A slightly larger variation in the mid-ventilation origin position was observed (mean, -0.2 mm; range, -3.6-4.2) than in the maximal intensity projection origin position (mean, -0.1 mm; range, -2.5-2.5). The range of motion was generally underestimated (mean, -1.5 mm; range, -5.5-1). CONCLUSIONS: Notable differences were seen in the 4D-CT imaging protocols for SBRT among centers. However, the observed deviations in target volumes were generally small. They were slightly larger for the mid-ventilation phases and smallest for the end-expiration phases. Steps to optimize and standardize the 4D-CT scanning protocols for SBRT are desirable

Hurkmans CW

Current technological clinical practise in breast radiotherapy; results of a survey in EORTC-Radiation Oncology Group affiliated institutions

Laan HP van der , Hurkmans CW*, Kuten A, Westenberg HA; On behalf of the EORTC-ROG Breast Working Party

Radiother Oncol. 2010 Mar;94(3):280-5. Epub 2010 Jan 28

PURPOSE: To evaluate the current technological clinical practise of radiation therapy of the breast in institutions participating in the EORTC-Radiation Oncology Group (EORTC-ROG). MATERIALS AND METHODS: A survey was conducted between August 2008 and January 2009 on behalf of the Breast Working Party within the

EORTC-ROG. The questionnaire comprised 32 questions on 4 main topics: fractionation schedules, treatment planning methods, volume definitions and position verification procedures. RESULTS: Sixty-eight institutions out of 16 countries responded (a response rate of 47%). The standard fraction dose was generally 2Gy for both breast and boost treatment, although a 2.67Gy boost fraction dose is routinely given in British institutions. The main boost modality was electrons in 55%, photons in 47% and brachytherapy in 3% of the institutions (equal use of photon and electron irradiation in 5% of the institutions). All institutions used CT-based treatment planning. Wide variations are seen in the definition of the breast and boost target volumes, with margins around the resection cavity, ranging from 0 to 30mm. Inverse planned IMRT is available in 27% and breath-hold techniques in 19% of the institutions. The number of patients treated with IMRT and breath-hold varied per institution. Electronic portal imaging for patient set-up is used by 92% of the institutions. CONCLUSIONS: This survey provides insight in the current practise of radiation technology used in the treatment of breast cancer among institutions participating in EORTC-ROG clinical trials

Lieshout M van

Quality Assurance of 4D-CT Scan Techniques in Multicenter Phase III Trial of Surgery Versus Stereotactic Radiotherapy (Radiosurgery Or Surgery for operable Early stage (Stage 1A) non-small-cell Lung cancer [ROSEL] Study)

Hurkmans CW*, van Lieshout M*, Schuring D*, van Heumen MJ*, Cuijpers JP, Lagerwaard FJ, Widder J, van der Heide UA, Senan S

Int J Radiat Oncol Biol Phys. 2010 Oct 13 [Epub ahead of print]

Voor abstract zie: Hurkmans CW

Lybeert ML

Neoadjuvant radiotherapy of primary irresectable unicentric Castleman's disease: a case report and review of the literature

Vries IA d., Acht MM v.*, Demeyere TB, Lybeert ML*, Zoete JP d.*, Nieuwenhuijzen GA*

Radiat Oncol. 2010;5(1):7

Voor abstract zie: Vries IA de

Lybeert ML

The number of metastatic sites for stage IIIA endometrial carcinoma, endometrioid cell type, is a strong negative prognostic factor

Jobsen JJ, Cate LN ten, Lybeert ML*, Steen-Banasik EM van der, Scholten A, Palen J van der, Slot A, Kroese MC, Schutter EM, Siesling S

Gynecol Oncol. 2010;117(1):32-6. Epub 2010 Jan 8

The aim of this study was to look at the impact of the number of sites with tumour involvement on outcome for patients with stage IIIA endometrioid-type endometrial carcinoma. PATIENTS AND METHODS: 141 patients stage IIIA were included. A central histopathological review was performed. Patients staged solely on the presence of a positive peritoneal washing were excluded. Follow-up ranged from 2 to 217 months with a median of 43 months. Endpoints of the study were locoregional recurrence rates, distant metastasis-free survival (DMFS), disease-free survival (DFS) and diseasespecific survival (DSS). RESULTS: In multivariate analyses the number of

involved sites showed to be the only independent significant variable for DMFS, DFS, and DSS with a Hazard Ratio of 2.1, 2.2, and 2.2, respectively. The DSS was significantly related to the number of involved sites, with a 5-year DSS of 70.4% for one site, 42.8% for two sites, and 43.9% for three sites, respectively (p=0.001). CONCLUSION: The number of involved sites outside the corpus uterine for stage IIIA seems to be a strong negative prognostic factor for stage IIIA endometrial carcinoma.

Martijn H

Three-dimensional Analysis of Recurrence Patterns in Rectal Cancer: The Cranial Border in Hypofractionated Preoperative Radiotherapy Can Be Lowered

Nijkamp J, Kusters M*, Beets-Tan RG, Martijn H*, Beets GL, Velde CJ vd, Marijnen CA
Int J Radiat Oncol Biol Phys. 2010 Jun 18. [Epub ahead of print]
Voor abstract zie: Vries IA de

Martijn H

Trends in colorectal cancer in the south of the Netherlands 1975-2007: Rectal cancer survival levels with colon cancer survival

Lemmens V, Steenbergen LV, Janssen-Heijnen M, Martijn H, Rutten H, Coebergh JW
Acta Oncol. 2010 Aug;49(6):784-96

Objective. In the Netherlands over 11 200 patients are yearly diagnosed with colorectal cancer (CRC), of who about 4 700 are expected to die of the disease ultimately. Investigating long-term trends is useful for clinicians and policy makers to evaluate the impact of changes in practice and will help predict future developments. Patients. The 26 826 cases of primary CRC (C18.0-C20.9) diagnosed between 1975 and 2007 in the Dutch population-based Eindhoven Cancer Registry area were included. We analysed trends in incidence, prevalence, stage distribution, treatment, survival, and mortality. Results. The age-standardised incidence of colon carcinoma kept increasing, most markedly in males (up to 39 patients per 100 000 inhabitants) and for tumours of the colon ascendens (subsite-specific incidence doubled). The incidence of rectal carcinoma remained stable. The share of patients aged 80 or older rose from 12 to 19% (p<0.0001). The proportion of patients diagnosed with distant metastases increased up to 25% for colon carcinoma (p<0.0001). Resection rates of the primary tumour remained high except for patients with metastasised disease, showing a decrease since 2000. Recently, the use of adjuvant chemotherapy seemed to level off among patients with stage III colon carcinoma, but the use of neo-adjuvant chemoradiation clearly increased among patients with stage II/III rectal cancer (p<0.0001). Five-year relative survival of colon cancer improved from 51% in 1975-1984 to 58% in 2000-2004, for rectal cancer it improved from 44 to 59%. Two-year relative survival of colon cancer in 2005-2006 was 69%, and 77% for rectal cancer. Conclusions. The changes in management of rectal cancer led to a superior increase in survival of these patients compared to patients with colon cancer, even surpassing the latter.

Martijn H

Was There Shortening of the Interval Between Diagnosis and Treatment of Colorectal Cancer in Southern Netherlands Between 2005 and 2008?

Steenbergen LN van, Lemmens VE, Rutten HJ*, Martijn H,* Coebergh JW

World J Surg. 2010 May;34(5):1071-9.

Sangen MJ van der

Are breast conservation and mastectomy equally effective in the treatment of young women with early breast cancer? Long-term results of a population-based cohort of 1,451 patients aged </=40 years

Sangen MJ van der *, Wiel FM van de, Poortmans PM, Tjan-Heijnen VC, Nieuwenhuijzen GA*, Roumen RM, Ernst MF, Tutein Nolthenius-Puylaert MC, Voogd AC

Breast Cancer Res Treat., 2010 Aug 12. [Epub ahead of print]

To compare the effectiveness of breast-conserving therapy (BCT) and mastectomy, all women aged </=40 years, treated for early-stage breast cancer in the southern part of the Netherlands between 1988 and 2005, were identified. A total of 562 patients underwent mastectomy and 889 patients received BCT. During follow-up, 23 patients treated with mastectomy and 135 patients treated with BCT developed a local relapse without previous or simultaneous evidence of distant disease. The local relapse risk for patients treated with mastectomy was 4.4% (95% confidence interval (CI) 2.4-6.4) at 5 years and reached a plateau after 6 years at 6.0% (95% CI 3.5-8.5). After BCT, the 5-, 10- and 15-year risks were 8.3% (95% CI 6.3-10.5), 18.4% (95% CI 15.0-21.8) and 28.2% (95% CI 23.0-33.4), respectively (P <0.0001). Adjuvant systemic therapy following BCT reduced the 15-year local relapse risk from 32.9% (95% CI 26.7-39.1) to 16.1% (95% CI 9.1-23.1), (P = 0.0007). In conclusion, local tumor control in young patients with early-stage breast cancer is worse after BCT than after mastectomy. Adjuvant systemic therapy significantly improves local control following BCT and also for that reason it should be considered for most patients </=40 years. Long-term follow-up is highly recommended for young patients after BCT, because even with systemic treatment an annual risk of local relapse of 1% remains up to 15 years after treatment.

Sangen MJ van der

Response to "benefit of radiation boost after whole-breast radiotherapy" (Int J Radiat Oncol Biol Phys 2009;75:1029-1034)

Voogd AC*, Sangen MJ van der*

Int J Radiat Oncol Biol Phys. 2010 May 1;77(1):316

Sangen MJ van der

Staging and management of axillary lymph nodes in patients with local recurrence in the breast or chest wall after a previous negative sentinel node procedure

Derkx F, Maaskant-Braat AJ*, Sangen MJ van der*, Nieuwenhuijzen GA*, Poll-Franse LV van de, Roumen RM, Voogd AC

Eur J Surg Oncol. 2010;36(7):646-51. Epub 2010 May 26

Voor abstract zie: Maaskant-Braat AJ

Schuring D

Quality Assurance of 4D-CT Scan Techniques in Multicenter Phase III Trial of Surgery Versus Stereotactic Radiotherapy (Radiosurgery Or Surgery for operable Early stage (Stage 1A) non-small-cell Lung cancer [ROSEL] Study)

Hurkmans CW*, van Lieshout M*, Schuring D*, van Heumen MJ*, Cuijpers JP, Lagerwaard FJ, Widder J, van der Heide UA, Senan S

Int J Radiat Oncol Biol Phys. 2010 Oct 13. [Epub ahead of print]

Voor abstract zie: Hurkmans CW

** = werkzaam in het Catharina-ziekenhuis*

Spoedeisende Hulp

Artikelen

Jong J de
Effect of acute and chronic job demands on effective individual teamwork behaviour in medical emergencies
Gevers J, Erven P van, Jonge J de, Maas M*, Jong J de*
J Adv Nurs. 2010 Jul;66(7):1573-83. Epub 2010 May 13
Voor abstract zie: Maas M

Maas M
Effect of acute and chronic job demands on effective individual teamwork behaviour in medical emergencies
Gevers J, Erven P van, Jonge J de, Maas M*, Jong J de*
J Adv Nurs. 2010 Jul;66(7):1573-83. Epub 2010 May 13
Abstract Aim. This paper is a report of a study conducted to determine the combined effect of acute and chronic job demands on acute job strains experienced during medical emergencies, and its consequences for individual teamwork behaviour. Background. Medical emergency personnel have to cope with high job demands, which may cause considerable work stress (i.e. job strains), particularly when both acute and chronic job demands are experienced to be high. This may interfere with effective individual teamwork behaviour. Methods. A cross-sectional survey study was conducted in 2008, involving 48 members (doctors and nurses) of medical emergency teams working in the emergency department of a Dutch general hospital. Data were analyzed by means of hierarchical regression analyses. Results. High acute job demands impeded effective teamwork behaviour, but only when they resulted in acute job strain. Acute emotional demands were more likely to result in acute job strain when chronic emotional job demands were also experienced as high. Although acute cognitive and physical strains were also detrimental, effective teamwork behaviour was particularly impeded by acute emotional strain. Conclusion. Acute job strains impair effective individual teamwork behaviour during medical emergencies, and there is urgent need to prevent or reduce a build-up of job strain from high acute and chronic demands, particularly of the emotional kind.

Maas M
Implementation of the curriculum for specialist training in Emergency Medicine: room for improval on details
APG van Driel, A Alkemade, M Maas, JC ter Maaten, WEM Schouten, A Scherpbier
Ned Tijdschr Geneeskd. 2010;154:A983
OBJECTIVE: To investigate what aspects of the new curriculum for specialist training in Emergency Medicine are actually implemented in daily practice. DESIGN: Descriptive study. METHOD: The curriculum was implemented as a pilot in 4 teaching hospitals, where a total of 32 residents in training in Emergency Medicine and 20 Emergency Medicine Program directors and Emergency physicians were surveyed using a web-based questionnaire querying the use of the different aspects of the curriculum in daily practice. RESULTS: Responses were received from 29 residents in training and 15 program directors and Emergency physicians. Both residents in training and program directors rated the patient mix seen during the training

programme adequate to excellent. No great differences were observed in how residents in training, trainers and physicians working in the Emergency Department assessed the curriculum. However, the results showed that the training plan should be discussed explicitly with each residents in training. More attention should be focussed on the Society Awareness, Knowledge and Science and Organisation competencies and the Disability and Dermatology themes. Competencebased assessment methods, such as multi-source feedback, specific to this type of curriculum have not yet been sufficiently implemented. CONCLUSION: The responses to the questionnaire demonstrated how the curriculum is handled in daily practice and provided information on the progress of the implementation of the curriculum. This will enable focussed feedback to teaching hospitals.

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Urologie

Artikelen

Broos HJ
The effect of distractions in the operating room during endourological procedures
Persoon MC*, Broos HJ*, Witjes JA, Hendrikx AJ*, Scherpbier AJ
Surg Endosc. 2011 Feb;25(2):437-43. Epub 2010 Aug 24
Voor abstract zie: Persoon MC

Hendrikx AJ
A Simulator for Teaching Transrectal Ultrasound Procedures: How Useful and Realistic Is It?
Persoon, MC*, Schout, BM*, Martens, EJ*; Tjiam, IM, Tielbeek, AV*, Scherpbier, AJ, Witjes, JA,Hendrikx, AJ*
Simulation in Healthcare: The Journal of the Society for Simulation in Healthcare. 2010;5(5):311-314
Voor abstract zie: Persoon MC

Hendrikx AJ
Analysis of Pitfalls Encountered by Residents in Transurethral Procedures in Master-Apprentice Type of Training
Schout BM*, Persoon MC*, Martens EJ,* Bemelmans BL, Scherpbier AJ, Hendrikx AJ*
J Endourol. 2010 Apr;24(4):621-8
Voor abstract zie: Schout BM

Hendrikx AJ
Effect of distraction on the performance of endourological tasks: a randomized controlled trial
Persoon MC*, van Putten K*, Muijtjens AM, Witjes JA, Hendrikx AJ*, Scherpbier AJ
BJU Int. , 2010 Sep 3 [Epub ahead of print]
Voor abstract zie: Persoon MC

Hendrikx AJ
The Effect of a Low-Fidelity Model on Cystoscopic Skill Training: A Single-Blinded Randomized Controlled Trial
Persoon MC*, Schout BM*, Muijtjens AM, Hendrikx, AJ*, Witjes, JA Scherpbier, AJ
Simulation in Healthcare: The Journal of the Society for Simulation in Healthcare.2010;5(4):213-218
Voor abstract zie: Persoon MC

Hendrikx AJ
The effect of distractions in the operating room during endourological procedures
Persoon MC*, Broos HJ*, Witjes JA, Hendrikx AJ*, Scherpbier AJ
Surg Endosc. 2011 Feb;25(2):437-43. Epub 2010 Aug 24
Voor abstract zie: Persoon MC

Hendrikx AJ
Virtual reality laparoscopic nephrectomy simulator is lacking in construct validity
Wijn RP*, Persoon MC*, Schout BM*, Martens EJ*, Scherpbier AJ, Hendrikx AJ*
J Endourol. 2010; 24(1): 117-22
Voor abstract zie: Wijn RP

Koldewijn EL
Bemoeilijkte mictie bij oudere mannen
Koldewijn EL
Modern Medicine. 2010; 2: 67-70

Koldewijn E
Casuistiek: Allogene trombocytengel bij urologische patiënt met een verworven trombocytopathie
Curvers J*, Koldewijn E, Everts PAM, Peters W, Scharnhorst V
Ned Tijdschr Bloedtransfusie 2010; 3: 94-96
Voor abstract zie: Curvers J

Koldewijn EL
Scrotal cancer: incidence, survival and second primary tumours in the Netherlands since 1989
Verhoeven RHA , Louwman WJ, Koldewijn EL*, Demeyere TBJ, and Coebergh JWW
Br J of Cancer, Oct 26;103(9):1462-6, 2010

BACKGROUND: Since the 1970s there have been few epidemiological studies of scrotal cancer. We report on the descriptive epidemiology of scrotal cancer in the Netherlands. METHODS: Data on all scrotal cancer patients were obtained from the Netherlands Cancer Registry (NCR) in the period 1989-2006 and age-standardised incidence rates were calculated also according to histology and stage. Relative survival was calculated and multiple primary tumours were studied. RESULTS: The overall incidence rate varied around 1.5 per 1,000,000 person-years, most frequently being squamous cell carcinoma (27%), basal cell carcinoma (19%) and Bowen's disease (15%). Overall 5-year relative survival was 82%, being 77% and 95% for patients with squamous and basal cell carcinoma, respectively. In all, 18% of the patients were diagnosed with a second primary tumour. CONCLUSION: The incidence rate of scrotal cancer did not decrease, although this was expected; affected patients might benefit from regular checkups for possible new cancers.

Koldewijn E
Silodosin Therapy for Lower Urinary Tract Symptoms in Men with Suspected Benign Prostatic Hyperplasia: Results of an International, Randomized, Double-Blind, Placebo- and Active-Controlled Clinical Trial Performed in Europe
Chapple CR, Montorsi F, Tammela TL, Wirth M, Koldewijn E*, Fernández Fernández E; on behalf of the European Silodosin Study Group
Eur Urol. 2010 Nov 10 [Epub ahead of print]

BACKGROUND: Silodosin is a new selective therapy with a high pharmacologic selectivity for the α(1A)-adrenoreceptor. OBJECTIVE: Our aim was to test silodosin's superiority to placebo and noninferiority to tamsulosin and discuss the findings in the context of a comprehensive literature review of the new compound silodosin. DESIGN, SETTING, AND PARTICIPANTS: We conducted a multicenter double-blind, placebo- and active-controlled parallel group study. A total of 1228 men ≥50 yr of age with an International Prostate Symptom Score (IPSS) ≥13 and a urine maximum flow rate (Q(max)) >4 and ≤15ml/s were selected at 72 sites in 11 European countries. The patients were entered into a 2-wk wash-out and a 4-wk placebo run-in period. A total of 955 patients were randomized (2:2:1) to silodosin 8mg (n=381), tamsulosin 0.4mg (n=384), or placebo (n=190) once daily for 12 wk. MEASUREMENTS: We calculated the change from baseline in IPSS total score (primary), storage and voiding subscores, quality of life (QoL) due to urinary symptoms, and Q(max). Responders were defined on the basis of IPSS and Q(max) by a decrease of ≥25% and an increase of ≥30% from baseline, respectively. RESULTS AND LIMITATIONS: The change from baseline in the IPSS total score with silodosin and tamsulosin was significantly superior to that with placebo ($p<0.001$): difference active placebo of -2.3 (95% confidence interval [CI], -3.2, -1.4) with silodosin and -2.0 (95% CI,-2.9, -1.1) with tamsulosin. Responder rates according to total IPSS were significantly higher ($p<0.001$) with silodosin (66.8%) and tamsulosin (65.4%) than with placebo (50.8%). Active treatments were also superior to placebo in the IPSS storage and voiding subscore analyses, as well as in QoL due to urinary symptoms. Of note, only silodosin significantly reduced nocturia versus placebo (the change from baseline was -0.9, -0.8, and -0.7 for silodosin, tamsulosin, and placebo, respectively; $p=0.013$ for silodosin vs placebo). An increase in Q(max) was observed in all groups. The adjusted mean change from baseline to end point was 3.77ml/s for silodosin, 3.53ml/s for tamsulosin, and 2.93ml/s for placebo, but the change for silodosin and tamsulosin was not statistically significant versus placebo because of a particularly high placebo response (silodosin vs placebo: $p=0.089$; tamsulosin vs placebo: $p=0.221$). At end point, the percentage of responders by Q(max) was 46.6%, 46.5%, and 40.5% in the silodosin, tamsulosin, and placebo treatment groups, respectively. This difference was not statistically significantly ($p=0.155$ silodosin vs placebo and $p=0.141$ tamsulosin vs placebo). Active treatments were well tolerated, and discontinuation rates due to adverse events were low in all groups (2.1%, 1.0%, and 1.6% with silodosin, tamsulosin, and placebo, respectively). The most frequent adverse event with silodosin was a reduced or absent ejaculation during orgasm (14%), a reversible effect as a consequence of the potent and selective α(1A)-adrenoreceptor antagonism of the drug. The incidence was higher than that observed with tamsulosin (2%); however, only 1.3% of silodosin-treated patients discontinued treatment due to this adverse event. CONCLUSIONS: Silodosin is an effective and well-tolerated treatment for the relief of both voiding and storage symptoms in patients with lower urinary tract symptoms suggestive of bladder outlet obstruction thought to be associated with benign prostatic hyperplasia. Its overall efficacy is not inferior to tamsulosin. Only silodosin showed a significant effect on nocturia over placebo.

Persoon MC

Analysis of Pitfalls Encountered by Residents in Transurethral Procedures in Master-Apprentice Type of Training

Schout BM*, Persoon MC*, Martens EJ,* Bemelmans BL, Scherpbier AJ, Hendrikx AJ*
J Endourol. 2010 Apr;24(4):621-8
Voor abstract zie: Schout BM

Persoon MC

Effect of distraction on the performance of endourological tasks: a randomized controlled trial

Persoon MC*, van Putten K*, Muijtjens AM, Witjes JA, Hendrikx AJ*, Scherpbier AJ
BJU Int. 2010 Sep 3 [Epub ahead of print]

Study Type - Therapy (case series) Level of Evidence_4 OBJECTIVE: To establish the effect of distraction on the performance of cystoscopy and basic endourological tasks by using a virtual reality (VR) simulator. SUBJECTS AND METHODS: A total of 86 third-year medical students from Maastricht University, who had no previous experience in performing the tasks on a VR simulator, were randomly assigned to an intervention or control group. All participants performed three endourological tasks on the VR simulator. Participants in the intervention group were distracted 1_min into the third task. The distraction consisted of being asked to answer questions about a medical case that had been presented to all the participants before the hands-on session. After two adequate verbal responses the conversation was terminated. Number of traumata, number of missed lesions in the bladder and time to completion were measured by the VR simulator. RESULTS:Number of traumata and missed lesions, as well as time to completion were significantly higher in the intervention than in the control group with effect sizes (using Cohen's categorization) of 0.48, 0.41 and 0.50 respectively. Nevertheless, only 9.5% of the participants in the intervention group reported feeling burdened by the distraction. CONCLUSIONS: Distraction during the performance of endourological skills results in significantly poorer performance by medical students on all the variables measured in a controlled learning environment. Most students do not realize they are affected by distraction. Further research is needed to determine the impact of distraction on more experienced participants and on patient safety.

Persoon MC

The effect of distractions in the operating room during endourological procedures

Persoon MC*, Broos HJ*, Witjes JA, Hendrikx AJ*, Scherpbier AJ
Surg Endosc. 2011 Feb;25(2):437-43. Epub 2010 Aug 24

BACKGROUND: Professionals working in the operating room (OR) are subject to various distractions that can be detrimental to their task performance and the quality of their work. This study aimed to quantify the frequency, nature, and effect on performance of (potentially) distracting events occurring during endourological procedures and additionally explored urologists' and residents' perspectives on experienced ill effects due to distracting factors.METHODS: First, observational data were collected prospectively during endourological procedures in one OR of a teaching hospital. A seven-point ordinal scale was used to measure the level of

observed interference with the main task of the surgical team. Second, semistructured interviews were conducted with eight urologists and seven urology residents in two hospitals to obtain their perspectives on the impact of distracting factors. RESULTS: Seventy-eight procedures were observed. A median of 20 distracting events occurred per procedure, which corresponds to an overall rate of one distracting event every 1.8 min. Equipment problems and procedure-related and medically irrelevant communication were the most frequently observed causes of interruptions and identified as the most distracting factors in the interviews. Occurrence of distracting factors in difficult situations requiring high levels of concentration was perceived by all interviewees as disturbing and negatively impacting performance. The majority of interviewees (13/15) thought distracting factors impacted more strongly on residents' compared to urologists' performance due to their different levels of experience. CONCLUSION: Distracting events occur frequently in the OR. Equipment problems and communication, the latter both procedure-related and medically irrelevant, have the largest impact on the sterile team and regularly interrupt procedures. Distracting stimuli can influence performance negatively and should therefore be minimized. Further research is required to determine the direct effect of distraction on patient safety.

Persoon MC

Virtual reality laparoscopic nephrectomy simulator is lacking in construct validity

Wijn RP*, Persoon MC*, Schout BM*, Martens EJ*, Scherpbier AJ, Hendrikx AJ*

J Endourol. 2010;24(1):117-22

Voor abstract zie: Wijn RP

Persoon, MC

A Simulator for Teaching Transrectal Ultrasound Procedures: How Useful and Realistic Is It?

Persoon, MC*, Schout, BM*, Martens, EJ*; Tjiam, IM, Tielbeek, AV*, Scherpbier, AJ, Witjes, JA,Hendrikx, AJ*

Simulation in Healthcare: The Journal of the Society for Simulation in Healthcare. 2010; 5(5):311-14

Introduction: We describe a new simulator for teaching transrectal ultrasound (TRUS) and present the results of a preliminary evaluation of the simulator's realism and usefulness for training. Methods: A simulator for abdominal ultrasound was adjusted by the developer to enable simulation of TRUS by providing an opening for inserting a dummy rectal probe. To enable TRUS simulation, data from ultrasound prostate imaging of eight real patients obtained with our regular ultrasound machine were transferred to the simulator by connecting the computer of the simulator to the ultrasound machine. These data were used to create images in the TRUS simulator. Residents and urologists used the simulator to perform TRUS in one of the eight patient cases and judged the simulator's realism and usefulness. Results: We were able to construct an initial urological module for the TRUS simulator. The images shown on the monitor of the simulator are quite realistic. The simulator can be used without difficulty to collect data, to create cases, and to perform TRUS. The absence of an option for prostate biopsy and the lack of tissue resistance were mentioned as

two important shortcomings. Forty-seven participants rated the simulator's overall realism and usefulness for training purposes as 3.8 (standard deviation: 0.7) and 4.0 (standard deviation: 0.8) on a five-point Likert scale, respectively. Conclusions: The simulator we describe can be used as a training tool for TRUS. It enables training with different patient cases and minimizes the burden to patients. Simulation of prostate biopsies should be added to increase the model's usefulness.

Persoon, MC

The Effect of a Low-Fidelity Model on Cystoscopic Skill Training: A Single-Blinded Randomized Controlled Trial

Persoon MC*, Schout BM*, Muijtjens AM, Hendrikx, AJ*, Witjes, JA Scherpbier, AJ
Simulation in Healthcare: The Journal of the Society for Simulation in Healthcare. 2010;5(4):213-18

Introduction: Models for training urological procedures without burdening patients are available atvarying costs. We examined the value of training on a low-fidelity model in addition to training on a highfidelity simulator in a cystoscopy training program. Methods: Thirty-two medical students were randomized to an intervention and a control group. The former started by performing cystoscopy on a low-cost, low-fidelity, glass globe model before moving on to training on the URO Mentor (UM), a computerized simulator. The control group took part in the same UM training program but not in the low-fidelity training. Performance on UM was assessed by a global rating score, percentage of correctly inspected areas of the bladder (% inspected areas), time, and number of traumas caused. Results: The intervention group had generally higher scores. Its global rating score on task 1 was significantly higher than that of the control group (Mann-Whitney U test, P = 0.046, effect size 0.6) and the group also scored higher, albeit not significantly, on time and % inspected areas. All students said they valued training with UM, but the appreciation of the intervention group was stronger (mean 8.9 vs. 8.1 on a scale from 1 to 10, P = 0.017, effect size 1.8). Conclusion: A low-fidelity glass globe model seemed to be an inexpensive educational tool to practice the first steps of cystoscopy. It may reduce training time on the UM simulator. The combined use of a low- and high-fidelity training model may provide an optimal learning effect.

Putten K van

Effect of distraction on the performance of endourological tasks: a randomized controlled trial

Persoon MC*, van Putten K*, Muijtjens AM, Witjes JA, Hendrikx AJ*, Scherpbier AJ
BJU Int. 2010 Sep 3 [Epub ahead of print]
Voor abstract zie: Persoon MC

Schout BM

Analysis of Pitfalls Encountered by Residents in Transurethral Procedures in Master-Apprentice Type of Training

Schout BM*, Persoon MC*, Martens EJ,* Bemelmans BL, Scherpbier AJ, Hendrikx AJ*
J Endourol. 2010 Apr;24(4):621-8

Abstract Background and Purpose: Today's simulators are frequently limited in their possibilities to train all aspects of endourological procedures. It is therefore indicated

to first make an inventory of training needs before (re)developing simulators. This study examined pitfalls encountered by residents in realtime transurethral procedures. Materials and Methods: First, difficulties that residents encounter in transurethral procedures (transurethral resection of the bladder tumor [TURBT], transurethral resection of the prostate [TURP], ureterorenoscopy [URS]) were identified by asking urologists and residents to complete an open questionnaire. Based on their answers a list of pitfalls was designed and tested in 28 pilot observations. Then, two raters (interrater agreement 0.72, 0.70, and 0.75 for TURBT, TURP, and URS, respectively) categorized all observed procedure-related interactions between residents and supervisors in 80 procedures as (1) (type of) pitfall or (2) no pitfall. Results: Pitfalls most frequently encountered were as follows: (1) planning/anticipation on new situations (median 27.3%, 29.3%, and 31.8% of total pitfalls in TURBT, TURP, and URS, respectively); (2) handling of instruments (11.5%, 10.6%, and 20.0% for TURBT, TURP, and URS); (3) irrigation management for TURBT (7.7%), depth of resection for TURP (8.9%), and use of X-ray for URS (13.3%). Conclusion: Designers of endourological simulators should include possibilities to train planning/anticipation on new situations, handling of instruments in all transurethral procedures, and irrigation management in TURBT, depth of resection in TURP, and timing usage of X-ray in URS.

Schout BM

Virtual reality laparoscopic nephrectomy simulator is lacking in construct validity

Wijn RP*, Persoon MC*, Schout BM*, Martens EJ*, Scherpbier AJ, Hendrikx AJ*

J Endourol. 2010;24(1):117-22

Voor abstract zie: Wijn RP

Schout, BM

A Simulator for Teaching Transrectal Ultrasound Procedures: How Useful and Realistic Is It?

Persoon, MC*, Schout, BM*, Martens, EJ*; Tjiam, IM, Tielbeek, AV*, Scherpbier, AJ, Witjes, JA,Hendrikx, AJ*

Simulation in Healthcare: The Journal of the Society for Simulation in Healthcare. 2010;5(5):311-14

Schout, BM

The Effect of a Low-Fidelity Model on Cystoscopic Skill Training: A Single-Blinded Randomized Controlled Trial

Persoon MC*, Schout BM*, Muijtjens AM, Hendrikx, AJ*, Witjes, JA Scherpbier, AJ

Simulation in Healthcare: The Journal of the Society for Simulation in Healthcare. 2010; 5(4):213-18

Voor abstract zie: Persoon MC

Wijn, RP

Virtual Reality Laparoscopic Nephrectomy Simulator Is Lacking in Construct Validity

Wijn RP*, Persoon MC, Schout BM, Martens EJ, Scherpbier AJ, Hendrikx AJ

J Endourol. 2010 Jan;24(1):117-22

Background and Purpose: Several training models have been developed to improve surgeons' operative skills as well as patient outcomes. Before implementing these models in training programs, their usefulness and accuracy need to be assessed. In this study, we examined the ability of a laparoscopic nephrectomy (LN) virtual reality (VR) simulator to distinguish between different levels of expertise (construct validity). Methods: Twenty-two novices (no LN experience), 32 intermediates (<10 LN procedures performed) and 10 experienced urologists (>/=10 LN procedures performed) performed the same retroperitoneal task on the LN VR simulator (Mentice,((R)) Sweden) three times, performing a practice task before and after the second time. Outcome parameters were time, blood loss, path length, and total score (combination of 62 different parameters). Results: No significant differences were found between intermediate and experienced participants. Task 3 performance showed no significant difference between any of the groups. Both intermediates and experienced participants were significantly faster than novices on the first two tasks and had a better total score. Learning curves of intermediate and experienced participants were flat after task two. Conclusions: The LN-VR simulator did not distinguish between intermediate and experienced participants. The analysis of the learning curves suggests that the tasks measured dexterity in using the simulator rather than an actual improvement of operative skills. We conclude that the LN-VR simulator does not have sufficient construct validity and is therefore, in its present form, not suitable for implementation in a urologic training program.

Wildt MJ de

Transverse testicular ectopia confirmed by ultrasonography

Lasfar W, Bosch RT van den, Pot DJ, Klijn AJ, Wildt MJ de*, Gratama JW

Ned Tijdschr Geneeskd. 2010;154(6):A155

Two newborn boys aged 2 and 3 months with unilateral inguinal hernia and a contralateral impalpable, non-scrotal testis, and a third boy aged 2.5 years with an impalpable non-scrotal testis were found to have transverse testicular ectopia. This is an uncommon abnormality in which both gonads migrate toward the same hemiscrotum. We illustrate that unilateral cryptorchidism and a contralateral inguinal hernia may indicate the presence of a rare type of male pseudohermaphroditism: persistent müllerian duct syndrome (PMDS). This syndrome is characterized by the presence of a uterus and fallopian tubes associated with abdominal testes and frequently inguinal hernia in a phenotypically and genotypically normal male. This syndrome is often discovered during repair of inguinal hernia or non-descended testes (cryptorchidism). Pre-operative ultrasonography in children with impalpable non-scrotal testis and a contralateral inguinal hernia (patent processus vaginalis)

may enable an early diagnosis of transverse testicular ectopia and proper surgical planning. Surgical orchidopexy was carried out and in the first two patients resection of the müllerian duct remnant (utriculus masculinus).

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Promoties

Anesthesiologie

Buise, MP
Gastric Microcirculation and Respiratory Morbidity following esophagectomy
Rotterdam : Erasmus universiteit, 2010
ISBN: 978-90-8590-035-1

Meeusen VC
Risk factors for job turnover among Dutch nurse anaesthetists
[s.l.] : [s.n.], 2010
ISBN: 978-90-9025699-3

Cardiologie

Tonino WA
Fractional flow reserve to guide percutaneous coronary intervention in multivessel coronary artery disease
Eindhoven : Technische Universiteit Eindhoven, 2010
ISBN: 978-90-386-2185-2

Cardiothoracale chirurgie

Straten, AH van
Outcome following ten years coronary artery bypass surgery
Maastricht : Universitaire Pers, 2010
ISBN: 978-90-5278-924-8

Chirurgie

Buzink, SN
Improving patient safety in image-based procedures
[sl] : [sn], 2010
ISBN: 978-94-6113-021-1

Verhofstad, N
Paternal exposure to Benzo(A)pyrene : a genetic risk in offspring?
Maastricht : Universitaire pers, 2010
ISBN: 978-94-6159-009-1

Gynaecologie

Kuppens, SM
Successful external cephalic version in breech
Eindhoven : De Wit Mediaconsultancy, 2010
ISBN: 978-90-9025688-7

Onderwijs & Onderzoek

Dierick-van Daele, AT
The introduction of the nurse practitioner in general practice
Maastricht : Maastricht university, 2010
ISBN 978-90-79488-87-2

OK

Stepaniak, PS
Modeling and Management of Variation in the Operating Theatre
Rotterdam : Erasmus universiteit, 2010
ISBN: 978-90-5335-351-8

Urologie

Schout BM
Training in Urology
Amsterdam : Vrije universiteit, 2010
ISBN: 978-90-8659-284-5

Wetenschapsavond

12 oktober 2010

Presentaties

Bramer S
Atriumfibrilleren rondom cardiochirurgische ingrepen; Een blik in onze database

Buzink SN
Verbetering van patiëntveiligheid in image-based procedures - verkleining van het verschil tussen het gewenste en werkelijke vaardigheidsniveau

Kusters M
Lokaal recidief van het rectum carcinoom

Schampaert S
Het effect van de intra-aortale ballonpomp (IABP) op de hemodynamica

Poster Presentaties

Pre-operative radiotherapy on general and disease-specific health status of rectal cancer survivors: a population-based study
Thong MS, Mols F, Lemmens VE, Rutten HJ*, Roukema JA, Martijn H *, Poll-Franse LV van de

Improvement of pharmacovigilance at the individual patient level: an electronic system to document reasons for medication discontinuation and to alert in case of unwanted represcription
Linden CM van der*, Jansen PA, Marum RJ van, Grouls RJ*, Egberts TC, Korsten HH*

Reasons for discontinuation of medication during hospitalisation; a descriptive study in 400 patients
Linden CM van der *, Jansen PA, Geerenstein EV van, Marum RJ van, Grouls RJ *, Egberts AC, Korsten HH*

Dose painting by numbers up to 100 Gy for stage II and III NSCLC, development of a clinical protocol
Theuws J *, Zwanenburg A*, Steenhuijsen J*, Schuring D*, Jaeger K de*, Bal M, Meijer G*

Assessment of the VODCA RT software performance for QA evaluation in EORTC radiation therapy clinical trials
Rosario T*, Hurkmans C*, Fenton P, Gulyban A

Leerpunten voor het herstel van een perineale hernia
Martijnse IS*, Nienhuijs SW*, Nieuwenhuijzen GA*, Wasowicz-Kemps DK*, Hingh IH de*, Rutten HJ*

Which lessons can be learned from abdominal perineal resection in patients with locally advanced rectal cancer?
Martijnse IS*, Wasowicz-Kemps DK*, Stokmans RA*, Nieuwenhuijzen GA*, Rutten HJ*

Clinical rule guided therapeutic drug monitoring of digoxin: development, validation and potential value
Schoemakers RJ*, Wasylewicz ATM* Scheepers-Hoeks AM*, Wezel R van *, Ackerman EW*, Grouls RJ *

Potential value of a clinical rule on therapeutic drug monitoring of lithium
Wasylewicz A.T*, Schoemakers RJ*, Scheepers-Hoeks AM*, Wezel R van*, Grouls RJ *

Impact of surgery and chemotherapy on health status and symptom burden of colon cancer survivors: a population-based study
Thong MS, Mols F, Lemmens VE, Creemers GJ*, Slooter GD, Poll-Franse LV van de

Publicatie index

Publicatie index

Specialisme	Tijdschrift artikelen	Promoties	Boeken	Hoofstuk	Totaal
Algemeen Klinisch Laboratorium	4				4
Anesthesiologie	15	2			17
Apotheek	6		1		7
Cardiologie	19	1			20
Chirurgie	61	2			63
Cardiothoracale chirurgie	16	1			17
Dermatologie	2		1		3
ECC en Bloedmanagement	3				3
Geestelijke verzorging			1	5	6
Geriatrie	3				3
Gynaecologie	6	1			7
Inwendige geneeskunde	20			1	21
Klinisch Fysische Dienst	2				2
Kindergeneeskunde	7				7
Longziekten	7			1	8
Multidisciplinaire oncologie				1	1
Neurologie	4				4
OK		1			1
O&O	6	1			7
Orthopedie	4				4
Plastische chirurgie	12				12
Radiologie	4				4
Radiotherapie	8				8
SEH	2				2
Urologie	10	1			11
Totaal	**221**	**10**	**3**	**8**	**242**

Auteursindex

Auteursindex