Programma
Wetenschapssymposium 2018

Jubileumeditie: 10 jaar Wetenschapssymposium MCL

dinsdag 27 maart 2018

Auditorium en Foyer MCL

16.00 tot 21.30 uur

Maak kennis met wetenschap in het MCL!

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Programma

Dagvoorzitter: Matty Koopmans

16.00 – 16.25 uur	Ontvangst
16.25 – 16.30 uur	Opening
16.30 – 16.45 uur	Abstract 1 “Borstprothesen gevuld met cohesieve siliconengel: Kommer en kwel?”. **Spreker** Roos Wolthuizen, Plastische Chirurgie, Medisch Centrum Leeuwarden.
16.45 – 17.00 uur	Abstract 2 “Multidisciplinary Antenatal Care for Vulnerable Women – a Retrospective Observational Case Control Study”. **Spreker** Larissa Freyer, Gynaecologie en Verloskunde, Medisch Centrum Leeuwarden.
17.00 – 17.30 uur	4 short research presentations - Power talks (1-4)
17.30 – 17.45 uur	Beste Klinische Les 2017 “een patient met multifocale encephalopatie ten gevolge van Rituximap bij CLL”. **Spreker** Jona Gardien, Neurologie, Medisch Centrum Leeuwarden.
17.45 – 18.15 uur	Themalezing “HemoBase: 10 jaar ervaring met een population based registry in Friesland”. **Sprekers** Robby Kibbelaar, Pathology Friesland, en Mels Hoogendoorn, Interne Geneeskunde, Medisch Centrum Leeuwarden.
18.15 – 19.00 uur	Pauze met buffet

Vervolg programma MCL Wetenschapssymposium Dinsdag 27 maart 2018

19.00 – 19.30 uur	Themalezing veilig moederschap. **Spreker** Jelle Stekelenburg, Gynaecologie en Verloskunde, Medisch Centrum Leeuwarden.
19.30 – 20.00 uur	4 short research presentations - Power talks (5-8)
20.00 – 20.15 uur	Abstract 3 “The association between plasma aminoacid concentrations and insulin resistance after Roux-en-Y gastric bypass during a mixed meal”. **Spreker** Merel van den Broek, Interne Geneeskunde, Medisch Centrum Leeuwarden.
20.15 – 20.30 uur	Abstract 4 “Similar changes in clinical assessments and response during treatment with TNF-inhibitors in male and female patients with ankylosin spondylitis.” **Spreker** Boukje van der Slik, Reumatologie en Klinische Immunologie, Universitair Medisch Centrum Groningen.
20.30 – 20.45 uur	Publieksstemming “Beste short research presentations - Power talks”.
20.45 – 21.00 uur	Prijsuitreiking WK Brouwerprijs voor beste klinische les 2017, en Auletiusprijs voor beste wetenschappelijk onderzoek 2017.
21.00 uur	Afsluiting symposium
21.05 – 21.30 uur	Borrel en hapjes met toost op winnaars.

Power talks

17.30 – 18.00 uur de 4 short research presentations - Power talks (1-4)
4 minuten presentatie, 2 minuten voor één of twee vragen vanuit het publiek.

1. Whole Specimen Intraoperative Frozen Section Analysis. Experience with 1082 Basal Cell Carcinomas. Muhammed Ali Kedilioglu, Plastische Chirurgie, Medisch Centrum Leeuwarden.

2. Effect of bearing type on outcome of Total Hip Arthroplasty (THA). Analysis of 209,912 THAs registered in the Dutch Arthroplasty Register. Rinne Peters, Orthopedische Chirurgie, Medisch Centrum Leeuwarden en Universitair Medisch Centrum Groningen.

3. Dynamic hyperinflation: an important target for treatment in asthma. Akke-Nynke van der Meer, Longziekten, Medisch Centrum Leeuwarden.

4. The effect of a change in organizational measures on (para)medical behavior and adherence to fluid resuscitation protocol. Laura Delmas Benito, Intensive Care, Medisch Centrum Leeuwarden.

19.30 – 20.00 uur 4 short research presentations - Power talks (5-8)
4 minuten presentatie, 2 minuten voor één of twee vragen vanuit het publiek.

5. Safety and efficacy of scheduled return visits for patients diagnosed with non-specific abdominal pain in the ED. Annemieke Boendermaker, Spoedeisende Hulp, Medisch Centrum Leeuwarden.

6. Mitochondrial function of peripheral blood mononucleur cells in fit and frail elderly. Marjanne van der Hoek, MCL academie, Medical Center Leeuwarden, Wageningen University en VHL University of Applied Sciences.

7. Long-term effect of bariatric surgery on the use of levothyroxine and thyroid hormone levels. Jan-Peter Yska, Klinische Farmacie en Farmacologie, Medisch Centrum Leeuwarden.

8. The prevalence of Hidradenitis Suppurativa in patients with Axial Spondyloarthritis in a Dutch region. Angelique Rondags, Dermatologie, Universitair Medisch Centrum Groningen.

Oral presentations

1 Borstprothesen gevuld met cohesieve siliconengel: kommer en kwel?

Wolthuizen, R. (Plastische Chirurgie, Medisch Centrum Leeuwarden, Leeuwarden), Pool, S.M.W. (Plastische Chirurgie, Medisch Centrum Leeuwarden, Leeuwarden), Mouës-Vink, C.M. (Plastische Chirurgie, Medisch Centrum Leeuwarden, Leeuwarden)

Background/Aim:
In Nederland worden jaarlijks 20.000-30.000 siliconen borstprothesen (SBP) geïmplanteerd. Bezorgdheid over mogelijke complicaties en gezondheidsrisico's is een terugkerend onderwerp in de praktijk, aangewakkerd door het schandaal rondom de Poly Implant Prothèsen (PIP). Dit uit zich onder andere in pijnklachten en angst voor de lekkage van siliconengel. Tot voor kort ontbrak een landelijk implantatenregister en derhalve een eenduidige voorlichting aan patiënten. Lokale registratie in het Medisch Centrum Leeuwarden (MCL) biedt ons toegang tot informatie over langere termijn klachten, complicaties en explantaties. In deze retrospectieve studie bepalen wij hiervan de frequentie bij patiënten met SBP uit de vierde en vijfde generatie.

Methods:
Middels retrospectief patiëntendossieronderzoek zijn de patiëntgegevens en de gegevens omtrent de implantatieprocedure en de geïmplanteerde borstprothese(n) achterhaald. Dit is gedaan voor 738 primair geïmplanteerde SBP bij 448 patiënten, geopereerd in de periode 2003 tot en met 2015. Klachten (subjectief), afwijkingen bij lichamelijk onderzoek en explantaties die zich ≥ 3 maanden na de implantatieprocedure voordeden werden gedocumenteerd. Op basis hiervan werd de frequentie van de meest voorkomende klachten en complicaties berekend voor cosmetische en reconstructieve SBP plaatsing. Ook zijn de associaties met de verschillende typen SBP, plaatsingsmethoden en reconstructiemethoden getoetst. Tot slot zijn de indicaties van de explantaties in kaart gebracht.

Results:
Van de 738 SBP waren er 481 wegens cosmetische en 257 wegens reconstructieve redenen geïmplanteerd. In de cosmetische groep gaf 15,0% postoperatieve klachten (follow-up 193 dagen) waarvan 10,2% discomfort/pijn. Discomfort/pijn en sensibiliteitsverlies tepel bleken geassocieerd met subglandulaire plaatsing ($p = 0,003$). Bij onderzoek werd in 9,8% een afwijking gevonden; palpabel/zichtbaar zijn en rimpeling kwamen het meest voor (respectievelijk 4,8% en 4,2%). Beiden zijn significant geassocieerd met subglandulaire plaatsing ($p < 0.03$). Na reconstructie gaf 24,1% postoperatieve klachten (follow-up 547 dagen) waarvan 16,0% discomfort/pijn. Kapselcontractuur deed zich voor bij 9,3% en was significant geassocieerd met radiotherapie. Bij 0,4% werd peroperatief lekkage vastgesteld.

Conclusion:
Binnen de reconstructieve groep gaven significant meer SBP postoperatieve klachten en complicaties in vergelijking met de cosmetische groep. In beide groepen kwamen discomfort- en pijnklachten aan de geopereerde borst het meest voor. De meest voorkomende complicatie binnen de cosmetische en reconstructieve groep was respectievelijk het palpabel en/of zichtbaar zijn van de borstprothese en kapselcontractuur. Zowel discomfort- en pijnklachten als de complicatie kapselcontractuur werden significant vaker gerapporteerd binnen de reconstructieve groep. Klachten en complicaties hebben tot de nodige explantaties geleid, welke significant vaker plaatsvonden binnen de reconstructieve groep. Slechts bij een zeer laag aantal werd peroperatief macroscopische lekkage vastgesteld.

2 Multidisciplinary Antenatal Care for Vulnerable Women – a Retrospective Observational Case Control Study

Larissa S. Freyer, B.Med.Sc., University of Groningen, Groningen.
Dr. Ineke R. Postma, department of obstetrics and gynecology, Medical Centre Leeuwarden, Leeuwarden.
Prof. Dr. Jelle Stekelenburg, department of obstetrics and gynecology, Medical Centre Leeuwarden, Leeuwarden and international aspects of reproductive heath, UMCG, Groningen.

Background:
Vulnerable pregnant women show a wide variety of psychosocial and psychiatric problems and thus require more individually tailored health care. The Psychiatric, Pediatric, Obstetric and Psychology (POPP) outpatient clinic at the Medisch Centrum Leeuwarden (MCL) aims to provide this care. Pregnancy outcomes of patients treated at the MCL POPP-clinic have thus far not been studied.

Aim:
The aim of this study was to compare the pregnancy outcomes of this specific POPP-population and the general population that gave birth in the MCL. Additionally, subgroups of the POPP-population were tested for their risk of increased obstetrical interventions and adverse pregnancy outcomes.

Methods:
The study was conducted among all POPP-patients who gave birth at the MCL between April 2016 and October 2017 (n = 166). These data were compared to the data of general pregnant population of the MCL, retrieved from the Perined-Insight data of 2015 (n = 1523). Statistical analysis was performed using SPSS. Chi-square Test of Independence was used to compare outcomes among different groups. The odds ratio was calculated to estimate the effect size of the results. Simple correlation and t-tests were used for continuous outcomes.

Results:
Compared to the general population the mean gestational age at birth was lower (38.8 vs. 39.2 weeks, p = .033), the odds for induced labor were 3.323 times higher (p < .000) and also the odds for small for gestational age (SGA) were 2.199 times higher (p = .047) in the POPP-population. Within the POPP-population, significant correlations were found between cannabis use and preterm delivery (p = .009, OR = 7.889). Secondary cesarean sections were more common in women with anxiety disorders (p = .037, OR = 2.738). Obstetrical interventions were associated with personality disorders (p = .045, OR = 6.602) and SSRI use (p = .022, OR = 2.642). A significantly lower birth weight was found in cigarette (p = .000), drug (p = .012) and alcohol users (p = .001).

Conclusion:
MCL POPP-patients have a lower gestational age at birth, their labor is more frequently induced and they have more commonly neonates with SGA compared to the general population. No differences were found for other outcomes such as preterm delivery, birth weight or perinatal death. Some subgroups within the POPP-population may be more at risk than others (concerning preterm delivery, secondary CS, obstetrical interventions and lower birth weight), although this requires further study.

3 The association between plasma aminoacid concentrations and insulin resistance after Roux-en-Y gastric bypass during a mixed meal

M. van den Broek (1), L.J.M. de Heide (1), M. Emous(2), N.Veeger (3) A.Wolthuis (4), R. Heiner-Fokker (5) A.P. van Beek (6)

1 Internal Medicine, 2 Surgery, 3 Epidemiology,Medical Center Leeuwarden, Leeuwarden; 4 Clinical Chemistry, Certe, 5 Clinical Chemistry, 6 Endocrinology, UMCG, Groningen

Background:
Roux-en-Y gastric bypass (RYGB) increases insulin sensitivity and can lead to complete remission of type 2 diabetes (T2D). At the same time it can also lead to the complication of postprandial hyperinsulinemic hypoglycemia (PHH). In the non-surgical population various aminoacids have been associated with insulin resistance and the development of T2D among which are the branched chain aminoacids (BCAA). Other aminoacids such as leucine and phenylalanine are known to be insulin secretagogues. We hypothesized that certain aminoacid profiles could be related to insulin resistance and to PHH in post-RYGB subjects

Aim:
To investigate the association between fasting and postprandial aminoacid concentrations and insulin, glucose and HOMA-IR in patients after RYGB during a mixed meal tolerance test (MMTT).

Methods:
42 patients after primary RYGB were studied during a MMTT. Bloodsamples were collected at baseline, every 10 minutes in the first half hour and every half hour until 210 minutes after the start. The samples were tested for insulin, glucose and 24 aminoacids. For all variables the incremental area under the curve (iAUC) and relative peak were calculated. Explorative analyses were performed in which subjects were divided depending on the median of the variable of interest.

Results:
The fasting concentrations of total EAA, the BCAAs leucine, isoleucine, valine and the aromatic aminoacids phenylalanine and tyrosine and also proline, glutamic acid and the aminoacid derivative alpha-aminobutyric acid were all significantly more than 10% higher in the population with a HOMA-IR above the median. The peak insulin concentration was positively associated with the iAUC of arginine and alpha-aminobutyric acid. Peak insulin concentration was also associated with peak concentrations of arginine, alanine, histidine, aspartic acid and alpha-aminobutyric acid. PHH was more present in subjects with a low HOMA-IR corresponding to a more insulin sensitive state. Of the aminoacids only iAUC of tyrosine was associated with PHH when defined as glucose < 3,3 mM, not as < 2,8 mM.

Conclusions:
Various fasting aminoacids are associated with insulin resistance as measured by HOMA-IR. PHH is associated to more insulin sensitivity as measured by HOMA-IR. These explorative results suggests that aminoacid metabolism could play a role in both insulin resistance and PHH after RYGB

4 Similar changes in clinical assessments and response during treatment with TNF-a inhibitors in male and female patients with ankylosing spondylitis.

Boukje van der Slik, MD1, Anneke Spoorenberg, MD/PhD1,2, Freke Wink, MD2, Reinhard Bos, MD/PhD2, Hendrika Bootsma, MD/PhD1,2, Fiona Maas, PhD1, Suzanne Arends,PhD1,2

1 Rheumatology and Clinical Immunology, University of Groningen, University Medical Center Groningen, The Netherlands
2 Rheumatology, Medical Center Leeuwarden, The Netherlands

Background:
Ankylosing spondylitis (AS) is a chronic auto-inflammatory rheumatic disease. The prevalence of AS according to the modified New York criteria is 2 times higher in men than in women, although for non-radiographic axial spondyloarthritis, this seems to be comparable between genders. There are also differences in the clinical presentation of AS and the clinical response to TNF-a inhibitors between men and women. Evaluating disease activity and outcome in AS is mostly based on patient-reported measures. However, in general, it is known that men and women approach their health and health-related problems differently. To evaluate clinical outcome, it is important to have knowledge about any potential differences between men and women in AS, since this may have consequences for the definition of treatment response and therapy choices.

Aim:
To investigate differences in disease activity, disease outcome and treatment response between male and female AS patients before and after starting TNF-a inhibitors.

Methods:
Patients from the Groningen Leeuwarden AS (GLAS) cohort who started TNF-a inhibitors before January 2013 and who had visits at baseline and after 3 months and/or 2 years of follow-up were included. Disease activity, disease outcome and treatment response were evaluated at these time points.

Results:
Of the 254 included AS patients, 69% were male. At baseline, women scored significantly higher compared to men on BASDAI 6.5 vs. 5.9, ASDAS 3.93 vs. 3.66, and tender entheses 5 vs. 2 respectively. In contrast, CRP swollen joints and history of extra-articular manifestations were comparable between genders. Women also experienced significantly worse physical function and QoL (BASFI 6.2 vs. 5.4, ASQoL 12 vs. 9), whereas men showed significantly more kyphosis (OWD 0.0 vs. 5.0) and spinal radiographic damage (mSASSS 2.4 vs. 7.8).
After 3 months and 2 years of follow-up, all clinical assessments improved significantly, with comparable change scores for women and men (e.g. 0-2 year change BASDAI -2.7 vs. -2.7, ASDAS -1.50 vs. -1.68, ASQoL -5 vs. -4). Female patients switched more frequently to another TNF-a inhibitor during 2 years of follow-up (32% vs. 14%).

Conclusion:
Women with AS experienced higher disease activity and worse physical function and quality of life, and men showed more spinal radiographic damage. Although women switched more often between TNF-a inhibitors, 2-year changes in clinical assessments were comparable between genders.

Power talks

1 Whole Specimen Intraoperative Frozen Section Analysis. Experience with 1082 Basal Cell Carcinomas.

Muhammed A. Kedilioglu, BSc,1 Paul G. Bos, MD,1 Kim De Jong, PhD,3 Niels A. Noordzij, MD,1 Robby E. Kibbelaar, MD, PhD,2 Oren Lapid, MD, PhD,4 Chantal M. Mouës-Vink, MD, PhD1.
1.Department of Plastic Surgery and Hand Surgery, Medical Centre Leeuwarden, Leeuwarden, The Netherlands
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3.Department of Epidemiology, Medical Centre Leeuwarden, Leeuwarden, The Netherlands
4.Department of Plastic Surgery and Hand Surgery, Academic Medical Centre, Amsterdam, The Netherlands

Abstract:
Background: Basal cell carcinomas (BCCs) excised leaving positive tumour margins, are at a higher risk of recurrence. Accordingly, complete tumour removal with preservation of healthy tissue, aiming for low recurrence rates, is the main goal in treating BCCs.

Objective:
The present study aimed to identify the reliability of the Whole Specimen Intraoperative Frozen Section Analysis (WIFSA) technique by comparing intraoperative WIFSA and postoperative Formalin-Fixed Paraffin-Embedded section analysis (FFPE) results in 1082 basal cell carcinomas and by assessing the recurrence rates during a follow-up period up to 10 years.

Methods:
A single-centre retrospective cohort of all patients with BCC of the face receiving surgical excision with the WIFSA method between January 2007 and December 2013 was evaluated. We compared the intraoperative frozen section results with postoperative FFPE in order to assess accuracy of the WIFSA. Recurrence rates were assessed among all BCCs with a tumour-free margin at final excision that had a minimum follow-up of 6 months.

Results:
A total of 996 patients with 1082 BCCs were treated with the WIFSA. Overall agreement of WIFSA with conventional postoperative FFPE was 98·8%, sensitivity and specificity being 99·0% and 98·7% respectively. We excluded 23 BCCs that still had positive tumour margins at the end of the procedure and another 67 for the analysis of recurrence rate because follow-up was shorter than 6 months. A total of 992 BCCs with a tumour-free margin at final excision had a mean follow-up of 5·6 years (mean 67 ±27·7 months (range 6-117 months)). The total recurrence rate was 2·1% (21 out of 992 BCCs). The recurrence rate among the primary tumours was 1·6% (13 out of 828 cases) and 4·9% among the recurring tumours (8 out of 164 cases).

Conclusion:
This study indicates that, in patients with primary or recurring BCCs, WIFSA provides a high accuracy for intraoperative specimen analysis and has a low recurrence rate after a mean follow-up of 5·6 years.

2 Effect of bearing type on outcome of Total Hip Arthroplasty (THA). Analysis of 209,912 THAs registered in the Dutch Arthroplasty Register.

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2. Department of Orthopedic Surgery, University of Groningen, University Medical Center Groningen, The Netherlands.

3. Dutch Arthroplasty Register (Landelijke Registratie Orthopedische Implantaten), 's Hertogenbosch, The Netherlands.

Background:

Increased activity of patients and a younger age at the time of the primary procedure have sparked the development ofalternative bearing surfaces such as ceramics and highly-crosslinked-polyethylene (HXLPE) were developed, in order to further improve implant performance of Total Hip Arthroplasties (THAs). Whether these alternative bearing surfaces result in increased longevity, is subject to debate.

Aim:

We aimed to determine the survival of these alternative bearing types and compare this with traditional metal-on-polyethelene (MoPE) THAs.

Methods:

Using the Dutch Arthroplasty Register (LROI), we identified all patients with a primary, non-metal-on-metal THA implanted in the Netherlands in the period 2007-2016 (n=209,912). Revision rates were calculated to determine differences in survivorship of THAs according to bearing type; MoPE, metal-on-HXLPE (MoHXLPE), ceramic-on-polyethylene (CoPE), ceramic-on-HXLPE (CoHXLPE), ceramic-on-ceramic (CoC), oxidized-zirconium-on-polyethylene (OxPE). Multivariable Cox proportional hazard regression ratios (HRs) were used for comparisons.

Results:

After adjustment for confounders CoHXLPE, CoC, and OxPE resulted in a statistically significantly lower risk of revision compared to MoPE after 9-years follow-up (HR=0.8-0.9 respectively, compared to HR=1.0). For small (22-28mm) femoral head THAs, lower revision rates were found for CoPE and CoHXLPE (HR=0.9). In the 36mm femoral head subgroup, CoC bearing THAs had a lower HR compared to MoHXLPE (HR=0.7 versus 1.0). Crude revision rates in young patients (<60 years) for CoHXLPE, CoC, OxPE (HR=0.7) were lower than MoPE (HR=1.0). However, after adjustment for case mix and confounders these differences did not reach statistical significance.

Conclusions:

We found a significant benefit in mid-term revision rates for CoHXLPE, CoC, and OxPE bearings compared to a traditional MoPE bearing surface in the Netherlands.

3 Dynamic hyperinflation: an important target for treatment in asthma

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2.Academic Medical Centre - Amsterdam (Netherlands)

Background:
Dynamic hyperinflation (DH) results from small airway dysfunction and contributes to dyspnea in chronic obstructive airways disease (COPD). Whether DH is important in asthma is unknown.

Aim:
To investigate the prevalence of DH in asthma and its relationship with asthma symptoms.

Methods:
Non-smoking (≤10 packyears), non-obese (BMI 25 kg/m2) adults with asthma and FEV1/FVC ≤80% predicted despite GINA step 4-5 treatment completed questionnaires (SGRQ, CCQ, ACQ), performed lung function tests, and underwent a metronome-paced tachypnea (MPT) test to assess DH [1]. DH was defined as an MPT-induced reduction in inspiratory capacity (IC) ≥10%.

Results:
27/31 patients (52% male, mean age 62 yr, mean FEV1 71% predicted) showed DH. Higher reductions in IC were related to poorer scores on ACQ (r=0.54, p=0.002), CCQ (r=0.52, p=0.003) and SGRQ (r=0.40, p=0.03), higher fluticasone dose (r=0.37, p=0.04), and to more bronchodilator reversibility (r=0.36, p=0.05) but not to FEV1. Patients with blood eosinophils ≥0.3x10E9/L showed stronger relationships between DH and poor symptom scores (ACQ r=0.82, p=0.002; CCQ r=0.70, p=0.02; SGRQ r=0.76, p=0.006).

Conclusions:
Dynamic hyperinflation is common in asthma and is strongly related to symptom scores, in particularly in patients with high blood eosinophils. This suggests that in these patients dynamic hyperinflation resulting from small airway inflammation is an important target for treatment.

Reference:
1. Lahaije AJMC, Willems LM, van Hees HWH, et al. Diagnostic accuracy of metronome-paced tachypnea to detect dynamic hyperinflation. Clin Physiol Funct Imaging. 2013;33(1):62-9.

4 The effect of a change in organizational measures on (para)medical behavior and adherence to fluid resuscitation protocol

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2Medical Center Leeuwarden, Department of Cardio-thoracic anaesthesiology , Leeuwarden, Netherlands

Background:
Fluid therapy remains the cornerstone of shock resuscitation, but recent studies have highlighted the potential dangers of fluid overload, and protocols have been established to apply responsible fluid resuscitation. However, studies show that adherence to protocols by healthcare providers remains a challenge.

Aim:
The aim of this study is to research the effect of a change in organizational measures on (para)medical behavior and adherence to fluid resuscitation protocols.

Methods:
Fluid balances (FB) of post-cardiac surgical patients, 12 hours after ICU admission, were retrospectively evaluated after the introduction of two different organizational measures, designed to (unconsciously) influence (para)medical behavior. Patients were divided into three groups: group A received 500ml fluid challenges, group B received 250ml fluid challenges and group C had a continuous FB registration throughout the entire hospitalization.

Results:
3 × 250 patients were included in the study. No significant differences were found across demographic features. The FB was significantly lower in group C in comparison to group A and B, (1.6 [0.7-2.6] L versus 2.8 [1.0-3.8] L and 2.8 [1.9-3.8] L respectively; ($p<0.001$)) (Fig.1). In a multivariate analysis FB was independently associated with: group C ($p<0.001$), a history of diabetes ($p=0.03$), the Acute Physiology and Chronic Health Evaluation III score (<0.001) and the duration of aortic-cross clamp ($p<0.001$).

Conclusions:
The main findings of this study substantiated the hypothesis that the introduction of continuous FB-tracking throughout the entire care process, is associated with a significant reduction in the administration of fluids in post-cardiac surgery patients, independent of differences in their baseline characteristics. Demonstrating that certain organizational changes can influence medical behavior beyond the scope of teaching and instruction, and therefore serves to provide awareness to the current issue known as 'knowledge-to-care gap'.

5 Safety and efficacy of scheduled return visits for patients diagnosed with non-specific abdominal pain in the ED.

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1 Department of Emergency Medicine, Medical Centre Leeuwarden, the Netherlands
2 Department of Surgery, Medical Centre Leeuwarden, the Netherlands

Background:
Many patients presenting with abdominal pain to emergency departments (ED's) are discharged without a clear diagnosis. For these patients, often qualified as having non-specific abdominal pain (NSAP), a re-evaluation strategy is often advocated.

Aim:
In our study we investigated the safety and efficiacy of the evaluation strategy for NSAP patients.

Methods:
Our study was a retrospective cohort study of 358 patients presenting to the ED. Primary outcome was the occurrence of a clinically relevant change in treatment at re-evaluation (surgery AND/OR, endoscopy during admission AND/OR hospitalization). Secondary outcomes were diagnostic agreement between index-and re-evaluation visit and the number of subjects who did not show up for re-evaluation but met the primary outcome within 3 months.

Results:
51 patients did not show up for re-evaluation. None of them met the primary endpoint within 3 months. For the remaining 305 patients, diagnostic agreement between the index- and re-evaluation visit was moderate (kappa 0.41, p<.001). A significant change in treatment at the time of re-evaluation was present in 22.3% of subjects. Of all clinical, biochemical and radiological variables available at the index visit, only CRP was significantly related to a change in treatment (CRP >27 mg.L-1: LR+ 1.69 [1.21-2.36]). Other variables that increased the likelihood of a change in therapy were an increase in CRP of > 25 mg. L-1 between index- and re-evaluation visit (LR+ 2.85 [1.88-4.32]) and the conduct of radiological studies at the time of the re-evaluation visit (LR+ 3.05 [2.41-3.86]).

Conclusion:
A re-evaluation strategy for patients discharged with non-specific abdominal pain from the ED is both safe and effective, and should be applied with a low threshold for all patients regardless the findings at their initial visit. Performance of both laboratory and imaging studies at the time of the re-evaluation visit increase the likelihood of a clinically relevant therapy change significantly and should therefore be considered.

6 Mitochondrial function of peripheral blood mononucleur cells in fit and frail elderly

Marjanne van der Hoek (1, 2, 3), Arie Nieuwenhuizen (2), Vincent de Boer (2), Feike van der Leij (3), Jaap Keijer (2)
1 MCL academie, Medical Center Leeuwarden, Leeuwarden; 2 Human and Animal Physiology, Wageningen University, Wageningen; 3 Food and Dairy Applied Research Centre, VHL University of Applied Sciences, Leeuwarden;

Background:
The geriatric syndrome of frailty is characterized by a loss of the physiological reserve leading to a lower capability of the body to cope with stressors. Evidence exists that abnormalities in the energy metabolism may underlie the pathogenesis of frailty. During ageing, the intramuscular mitochondrial content and function decline. This decline is more pronounced in low-functioning elderly than in high-functioning elderly.

Aim:
In this study, we investigated the mitochondrial function of peripheral blood mononuclear cells in fit and frail elderly by using healthy young individuals as a reference group. In addition, we examined the relation between mitochondrial function and physical performance in the elderly.

Methods:
In total, 81 subjects were enrolled in this cross-sectional study. We examined 26 healthy young individuals (mean age 23.0 ± 1.9 years), 30 fit elderly (mean age 79.4 ± 2.8, frailty score = 0) and 25 frail elderly (mean age 80.5 ± 3.8, frailty score ≥ 1). Frailty was determined using five criteria; unintentional weight loss, self-reported exhaustion, low physical activity, slow walking speed and low hand grip strength. Physical performance was assessed using gait speed of a 400m walk test, the Short Physical Performance Battery and a handgrip strength test. Mitochondrial respiration and glycolysis were measured after blood sampling in peripheral blood mononuclear cells using extracellular flux analysis (Agilent Seahorse XF technology).

Results:
No significant differences were found in the mitochondrial function of peripheral blood mononuclear cells between the three subsets of subjects included in this study. In addition, the parameters of mitochondrial respiration and glycolysis were not correlated with the physical performance indicators gait speed, Short Physical Performance Battery Score and handgrip strength.

Conclusions:
Our findings indicate that the mitochondrial function of peripheral blood mononuclear cells is not linked to the physical phenotype of frailty, nor to physical performance of elderly.

7 Long-term effect of bariatric surgery on the use of levothyroxine and thyroid hormone levels

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Background:
The results of previous research on the effect of bariatric surgery on thyroid function and the use of levothyroxine the first years after surgery are inconsistent.

Aim:
To evaluate the effect of different types of bariatric surgery on the defined daily dose of levothyroxine (DDD LT4), thyroid-stimulating hormone (TSH) and free thyroxine (fT4) in female patients with hypothyroidism until 48 months after surgery.

Methods:
For this retrospective observational study 53 hypothyroid patients were selected from a database of 451 patients who underwent bariatric surgery in the MCL between 2008 and 2011. For patients who gave their informed consent medication histories of LT4 and results of TSH and fT4 levels were collected from pharmacies and general practitioners from one year before surgery until four years after surgery. Changes in DDD LT4, TSH and fT4 over a 48 month period after surgery were analysed.

Results:
The prevalence of hypothyroidism was 11.8% (53/451). Thirty-seven patients were included in the study. Twenty-seven patients underwent Roux-en-Y gastric bypass surgery (RYGB), six Gastric Sleeve (GS), three Adjustable Gastric Band (AGB) and one mini-Gastric Bypass (mini-GB). After 48 months the overall DDD LT4 increased 11.5 mcg ± 29.1 (p=0.054) in the RYGB-group and decreased 5.0 mcg ± 27.4 (p=0.704) in the GS-group. However, results show variations in dosage changes of LT4 between patients. The DDD LT4 increased in 48.1% and decreased in 22.2% of the RYGB patients and increased and decreased in 33.3% of the GS patients 48 months after surgery. Aside from those variations, 24-48 months after surgery the dose remained stable in 73.1% of the RYGB patients and in 60.0% of the GS patients. After 48 months in the RYGB-group the median TSH changed 0.0±8.8 mU/L (p=0.849) and the average fT4 level decreased 0.9±3.5 pmol/L (p=0.489).

Conclusions:
After 48 months the influence of bariatric surgery on the use of LT4 depends on the type of sugery and on the individual patient. There is no change in TSH and and a slight decrease in fT4 levels 48 months after RYGB. In the first two years after surgery clinicians should regularly monitor TSH and fT4 levels for individual dose adjustment of LT4. Thereafter, the frequency of monitoring might be decreased.

8 The prevalence of Hidradenitis Suppurativa in patients with Axial Spondyloarthritis in a Dutch region

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Background:
Spondyloarthritis (SpA), a chronic inflammatory rheumatic disease, and hidradenitis suppurativa (HS), a chronic debilitating inflammatory skin disease, share several clinical en pathophysiological features. Recently, SpA was reported to be more prevalent (2.3-28.2%) in patients with HS than in the general population. Conversely, the prevalence of hidradenitis in spondyloarthritis is not exactly known.

Aim:
To determine the prevalence of HS in patients with axial SpA, a subtype of SpA primarily of the axial skeleton. Secondly, to identify patient characteristics associated with the presence of HS in axial SpA.

Methods:
In this two-centre cross-sectional study, a self-screening questionnaire based on validated diagnostic HS questions was sent to all participating patients from the Groningen Leeuwarden Axial Spondyloarthritis (GLAS) cohort fulfilling the ASAS axial SpA criteria. Self-reported HS symptoms were confirmed by previous medical diagnosis or verification by phone using highly specific validated questions.

Results:
In total, 75.6% (449/592) questionnaires were eligible for analyses. Included patients had a mean age of 50±13 years, 63% was male, mean symptom duration was 23±13 years, and 78% was HLA-B27 positive. HS diagnosis could be confirmed in 41 patients, resulting in an estimated prevalence of 9.1%. In comparison to patients without a positive history of HS, these patients were more often female (54% vs. 35%, P=0.02), showed higher axial SpA disease activity (mean BASDAI 4.5 vs. 3.6, p=0.01 and ASDASCRP 2.6 vs. 2.2 P=0.003) and worse quality of life (QoL) (median ASQoL 9.0 vs. 4.0, P<0.001). Also, a history of heel enthesitis and dactylitis was more prevalent (34% vs. 19%, P=0.03 and 15% vs. 6%, P=0.05, respectively). Multivariable analysis showed that a higher score on ASDAS was independently associated with HS (OR: 1.639, 95% CI 1.176-2.284).

Conclusions:
In our cohort of axial SpA patients, HS is more prevalent than in the general population (9.1% versus 0.053-4.1%). HS is associated with female gender, lower QoL, and especially higher axial SpA disease activity. Clinical awareness of hidradenitis suppurativa in axial spondyloarthritis patients may contribute to the understanding, management and outcome of both diseases.

Abstracts

1 Similar Superior Patient Reported Outcome Measures (PROMs) for anterior and posterior approach after Total Hip Arthroplasty in the Netherlands

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Introduction:
Patient Reported Outcome Measures (PROMs) are being used to evaluate the outcome of Total Hip Arthroplasty (THA) in terms of patient satisfaction, physical function and pain. Whether surgical approach used to implant the prosthesis influences PROMs is subject to debate.

Aim:
Our aim is to determine the effect of surgical approach on PROMs after primary THA in the Netherlands. We hypothesize superior PROM scores for the posterolateral and anterior approach, compared to the lateral and anterolateral approach.

Methods:
We selected all primary THAs, performed between 2015-2016, registered in the Dutch Arthroplasty Register (LROI). Based on surgical approach 4 groups were discerned: direct anterior, anterolateral, direct lateral and posterior approach. The following PROMs were recorded: Hip disability and Osteoarthritis Outcome Score Physical function Short form (HOOS-PS), Oxford Hip Score (OHS), EQ-5D index and EQ-5D thermometer, and Numeric Rating Scale (NRS) measuring pain. The difference between pre-operative and post-operative scores (3 months) were calculated (delta-PROM) and used as primary outcome measure. Multivariate linear regression analysis was performed for comparisons. Cohen's d was calculated as a standard measure of effect size.

Results:
All 4 approaches resulted in a significant increase of PROMs (n=12,274). The direct anterior and posterior approach were associated with significantly more improvement in HOOS-PS scores after 3 months compared to the anterolateral and direct lateral approach. Furthermore, the posterolateral approach was associated with greater improvement on NRS pain scores, both in rest or during activities, compared to the anterolateral approach. No relevant differences in delta-PROM were seen between the anterior and posterolateral approach.

Conclusions:
Anterior and posterolateral approaches showed more improvement in self-reported physical functioning (HOOS-PS) compared to anterolateral and direct lateral approaches in patients receiving a primary THA in the Netherlands.

2 Influence of patient characteristics (case-mix) on outcome of Total Hip Arthroplasty; A Dutch Arthroplasty Register study

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Background:
National arthroplasty registry data is increasingly being used to evaluate provider and device performance in orthopedic care. However, one of the primary criticisms is the lack of well-developed risk adjustment models that adjust for factors unrelated to the provider or device that are known to influence outcomes, generally known as case-mix factors. Outcome after Total Hip Arthroplasty (THA) (e.g. revision rates and Patient Reported Outcome Measures (PROMs)), can be influenced by case-mix factors.

Aim:
Our aim is to determine the effect of case-mix (e.g. age, sex, BMI, ASA-, and Charnley score, previous operations to the affected hip joint, and smoking status) on both revision rates and PROMs after primary THA in the Netherlands.

Methods:
We used the Dutch Arthroplasty Register (LROI) to determine the effect of case-mix on revision rate and PROMs after primary THA. Two cohorts were compiled. The first cohort included all primary THAs performed in the Netherlands between 2007-2016 (n=229,867). Multivariate Cox proportional hazard ratios (HRs) were used to calculate the difference in THA survivorship in patients with different patient characteristics (age, sex, ASA-score, BMI, Charnley-score, smoking status, and previous operation to the hip). The second cohort consisted of all primary THAs performed between 2014-2016 (n=15,084). Hip disability and Osteoarthritis Outcome Score Physical function (HOOS-PS), Oxford Hip Score (OHS), EQ-5D index score and thermometer, and Numeric Rating Scales (NRS) measuring pain, during activities and in rest, were recorded. Multivariable linear regression was used to examine the association between case-mix and PROMs. Cohens' d was used to measure effect size.

Results:
Case-mix factors associated with an increased risk for revision were: age <60 years (HR=1.19), male gender (HR=1.18), higher ASA-scores (II and III-IV) (HR=1.12 and 1.42), previous operations to the hip (HR=1.28), smoking (HR=1.26) and a high BMI (30-40, >40) (HRs=1.23 and 1.74).
Postoperative improvement on HOOS-PS, OHS, EQ-5D, and pain relief were significantly influenced by age, sex, ASA-class, BMI, and previous operations to the hip.

Conclusions:
Risk for revision of THA was more influenced by patient characteristics compared to surgical and implant related variables, with BMI as the strongest predictor. The influence of case-mix on PROMs seems limited.

3 Direct oral anticoagulants during pregnancy, current evidence in humans.

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City.

Introduction:

Direct oral anticoagulants (DOACs) are increasingly used for anticoagulation or prevention of thromboembolic events in conditions that may co-occur with pregnancy, such as deep venous thrombosis, pulmonary embolism and atrial fibrillation. However, evidence regarding efficacy and safety during pregnancy is scarce.

Aim:

To systematically review the current literature concerning the efficacy and safety and pregnancy outcome of DOACs during pregnancy in humans.

Methods Systematic review of studies published up to 04-07-2017.

Results:

236 cases of DOAC use during pregnancy were reported in recent literature. Rivaroxaban was the most reported DOAC (n=178), followed by dabigatran (n=27, 11%), apixaban (n=21, 9%) and edoxaban (n=10, 4%). DOACs were mostly used for prophylaxis or treatment of thrombosis DVT (n=91). DOACs were discontinued within the first 2 months of pregnancy in 84%, with maximum reported duration of 26 weeks. Pregnancy outcome data were available for 59% of the140 pregnancies, of which 3928% were electively terminated. In ongoing pregnancies total miscarriage rate was 31% (n=31) and live birth rate was 68% (n=69). Foetal and neonatal abnormalities were reported in 8 pregnancies 8%, of which at least half (bone and facial structural abnormalities) are suspected to be related to Rivaroxaban use during the 1st trimester of pregnancy. In only 18% of cases (n=42), the presence or absence of thrombotic and bleeding I complications was reported.

Conclusion:

The limited available evidence raises concern regarding embryo-foetal safety, with high incidence of miscarriages and at least a 4% rate of anomalies with the use of Rivaroxaban. Not enough data is available to judge safety and efficacy of the use of DOACs during pregnancy.

4 Biological versus mechanical heart valve prosthesis during pregnancy in women with congenital heart disease.

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Aim:
To evaluate anticoagulation regimes and pregnancy outcome in women with mechanical and biological prosthetic heart valves (PHV) in women with mechanical PHV.

Methods:
Retrospective multicenter cohort studying pregnancy outcomes in an existing cohort of patients with PHV.

Results:
52 women had 102 pregnancies of which 78 pregnancies (46 women) ≥20 weeks duration (59 biological, 19 mechanical PHV). Miscarriages (n=19, ≤ 20 weeks) occurred more frequently in women using anticoagulation (p<.05). During 42% of pregnancies of women with mechanical PHV a combined low molecular weight heparin (LMWH) vitamin-K-antagonist anticoagulation regime was used (n=8). Overall, cardiovascular, obstetric and fetal/neonatal complications occurred in 17% (n=13), 68% (n=42) and 42% (n=27) of the pregnancies. Women with mechanical PHV had significantly higher cardiovascular (12% vs 32%, p<.05), obstetric (59% vs 85%, p=.02) and fetal/neonatal (34% vs 61%, p<.05) complication rates than women with biological PHV. This was related to PHV thrombosis (n=3, p<.02), post-partum hemorrhage (p<.02), cesarean section (p<.02), low birth weight and small for gestational age (both p<.05). PHV thrombosis occurred in 3 pregnancies, including 2/5 pregnancies with pulmonary mechanical PHV. PHV thrombosis was related to necessary cessation of anticoagulation therapy or insufficient monitoring of LMWH. Other cardiovascular complications occurred equally frequent in both groups.

Conclusion:
Complications occur more often in pregnancies of women with a mechanical PHV than in women with a biological PHV, mainly caused by PHV thrombosis and bleeding complications. Meticulous monitoring of anticoagulation in pregnant women is necessary. Women with a pulmonary mechanical PHV are at high risk of complications.

5 Maternal mortality due to cardiovascular disease in the Netherlands: a 21 years' experience

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Aim:
Cardiovascular disorders are the leading cause of indirect maternal mortality in Europe. The aim of this study is to present an extensive overview concerning the specific cardiovascular causes of maternal death and identify avoidable contributing care factors related to these deaths.

Methods:
We evaluated assessed all cases of cardiovascular maternal death collected by a systematic national confidential enquiry of maternal deaths published by the Dutch Maternal Mortality Committee (MMC) on behalf of the Netherlands Society of Obstetrics and Gynecology over a 21-year period (1993-2013) in the Netherlands.

Results:
There were 96 maternal cardiovascular deaths (maternal mortality rate from cardiovascular diseases 2.4/100.000 live born children). Causes were aortic dissection (n=20, 21%), ischemic heart disease (n=17, 18%), cardiomyopathies (including peripartum cardiomyopathy and myocarditis, n=20, 21%) and (unexplained) sudden death (n=27, 28%). Most deaths occurred postpartum (n=55, 55%). Care factors that may have contributed to the adverse outcome were identified in 27 cases (28%). These factors were patient-related in 40% (pregnancy against medical advice, underestimation of symptoms) and health care provider related in 60% (no recognition or delay ofof diagnosis, delay in referral).

Conclusion:
Maternal cardiovascular mortality ratioe is low in the Netherlands and the main causes of maternal cardiovascular mortality are in line with other European reports. In a minority contributing care factors that were possibly preventable were identified. Women with cardiovascular disease should be properly counselled about risks of pregnancy and symptoms of complications. Education of care providers about the incidence, presentation and diagnosis of cardiovascular disease during pregnancy is advised to further improve maternal outcome.

6 The effect of fluid overload on length of stay ICU and duration of mechanical ventilation after cardiac surgery

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Background:
Although fluid therapy remains the foundation of shock resuscitation, fluid overload is associated with longer
mechanical ventilation, renal failure and even mortality. Therefore, the benefit of fluid expansion associated with increased cardiac output and tissue perfusion should be balanced against the risk of pulmonary and tissue edema.

Aim:
The aim of this study is to investigate the effect of fluid overload on mechanical ventilation and length of stay in the Intensive Care Unit (LOS ICU) in post-cardiac surgery patients.

Methods:
In this retrospective single-center observational study the fluid balance, after 12 hours of ICU admission of postcardiac surgical patients, were evaluated. The LOS ICU and the duration of mechanical ventilation until the first extubation were recorded. Fluid balances (FB) were divided into quartiles and the 75th percentile was defined as high FB.

Results:
750 patients were included. The duration of mechanical ventilation and LOS ICU both increased noticeably in the fourth quartile compared to the first 3 quartiles. Moreover, for every liter increase in fluid balance there was an associated 1.5 risk increase of having prolonged mechanical ventilation, and a two-fold risk of extended LOS ICU.

Conclusions:
Fluid overload in post-cardiac surgery patients is independently associated with prolonged mechanical ventilation and extended LOS ICU.

7 Een geoccludeerde arteria femoralis superficialis als toevlucht in een acute revascularisatie: case serie over de 'Proper Conduit Technique'

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Background:
Een mogelijke complicatie na een open revascularisatie van de arteria femoralis is een diepe wondinfectie van de lies. Deze infectie kan leiden tot een levensbedreigende situatie waarbij acute interventie nodig is. Een solide reconstructie kan lastig zijn als autoloog materiaal eerder gebruikt is voor bijvoorbeeld een bypass. Het ligeren van de arterie zonder revascularisatie kan leiden tot claudicatio intermittens, rustpijn of extremiteitamputatie. Synthetische reconstructie heeft niet de voorkeur vanwege het geïnfecteerde gebied of de kans op een wondinfectie. Ad hoc werd in een acute setting een segment van een reeds geoccludeerde arteria femoralis superficialis (AFS) verkregen en behandeld volgens de eversietechniek zoals bekend van de carotis endarterectomie. Het verkregen segment werd als conduit ingehecht.

Aim:
Het beschrijven van een duurzame autologe vaat reconstructie in een geinfecteerde lies

Methods:
De klinische ervaring met het gebruik van een geoccludeerde AFS als autologe conduit voor arteriële reconstructie is beschreven. Data van zeven patiënten zijn verkregen uit het patiëntendossier en retrospectief geanalyseerd. Op verzoek heeft een medisch tekenaar een schematisch overzicht gemaakt van de stappen van de proper conduit techniek (PCT). Een echo duplex vond plaats bij elke patiënt om de doorgankelijkheid van de conduit te controleren na minimaal 6 maanden.

Results:
Zeven patiënten met een voorgeschiedenis van vaatlijden ondergingen een open revascularisatie waarbij een segment van de AFS werd verkregen. Een eversie endarterectomie van het geselecteerde AFS segment werd uitgevoerd en dit AFS segment werd gebruikt als conduit om de continuïteit van de bloedtoevoer naar het been te herstellen. Er deden zich geen complicaties voor en alle lieswonden herstelden voorspoedig. Tot op heden zijn alle conduits patent met een minimale follow-up van 6 maanden.

Conclusion:
De 'proper conduit technique' bij een geoccludeerd AFS segment lijkt een goed uitvoerbare methode voor vaatchirurgen wanneer zij geconfronteerd worden met acute of electieve problemen van de arteria femoralis communis met potentiele liesregio problemen, risico op infectie en mogelijk extremiteit verlies. De PCT heeft een vlakke leercurve en is relatief gemakkelijk aan te leren als de (carotis)eversietechniek reeds beheerst wordt. Lange termijn follow up is nodig om te bepalen of de tot nu toe veelbelovende patency zich in de toekomst ook voortzet.

8 A validated high-resolution accurate mass LC-MS assay for quantitative determination of metoprolol and a-hydroxymetoprolol in human serum for application in pharmacokinetics

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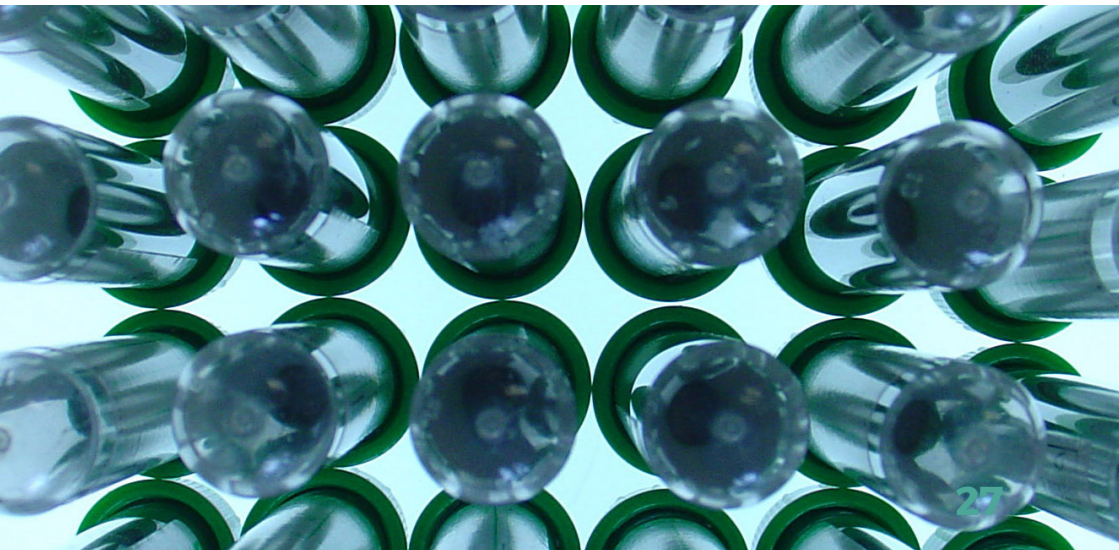
Abstract:
To determine metoprolol and its metabolite a-hydroxymetoprolol in human serum we validated a method on an LC system with an Exactive® Orbitrap mass spectrometer (Thermo Scientific) as detector and isotope-labelled metoprolol-d7 as internal standard. A simple sample preparation was used with water-acetonitrile (15:85, v/v) as precipitation reagent. This method has a chromatographic run time of 15 min and linear calibration curves in the range of 5.0-250 µg/L for both metoprolol and a-hydroxymetoprolol. Validation showed the method to be accurate, with a good precision, selective and with a lower limit of quantitation of 2.0 µg/L for metoprolol and 1.0 µg/L for a-hydroxymetoprolol, respectively. This validated LC-Orbitrap MS analysis for metoprolol and a-hydroxymetoprolol can be used for application in human pharmacokinetics.



9 The association between plasma aminoacid concentrations and insulin resistance after Roux-en-Y gastric bypass during a mixed meal

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Background:
Roux-en-Y gastric bypass (RYGB) increases insulin sensitivity and can lead to complete remission of type 2 diabetes (T2D). At the same time it can also lead to the complication of postprandial hyperinsulinemic hypoglycemia (PHH). In the non-surgical population various aminoacids have been associated with insulin resistance and the development of T2D among which are the branched chain aminoacids (BCAA). Other aminoacids such as leucine and phenylalanine are known to be insulin secretagogues. We hypothesized that certain aminoacid profiles could be related to insulin resistance and to PHH in post-RYGB subjects

Aim:
To investigate the association between fasting and postprandial aminoacid concentrations and insulin, glucose and HOMA-IR in patients after RYGB during a mixed meal tolerance test (MMTT).

Methods:
42 patients after primary RYGB were studied during a MMTT. Bloodsamples were collected at baseline, every 10 minutes in the first half hour and every half hour until 210 minutes after the start. The samples were tested for insulin, glucose and 24 aminoacids. For all variables the incremental area under the curve (iAUC) and relative peak were calculated. Explorative analyses were performed in which subjects were divided depending on the median of the variable of interest.

Results:
The fasting concentrations of total EAA, the BCAAs leucine, isoleucine, valine and the aromatic aminoacids phenylalanine and tyrosine and also proline, glutamic acid and the aminoacid derivative alpha-aminobutyric acid were all significantly more than 10% higher in the population with a HOMA-IR above the median. The peak insulin concentration was positively associated with the iAUC of arginine and alpha-aminobutyric acid. Peak insulin concentration was also associated with peak concentrations of arginine, alanine, histidine, aspartic acid and alpha-aminobutyric acid. PHH was more present in subjects with a low HOMA-IR corresponding to a more insulin sensitive state. Of the aminoacids only iAUC of tyrosine was associated with PHH when defined as glucose < 3,3 mM, not as < 2,8 mM.

Conclusions:
Various fasting aminoacids are associated with insulin resistance as measured by HOMA-IR. PHH is associated to more insulin sensitivity as measured by HOMA-IR. These explorative results suggests that aminoacid metabolism could play a role in both insulin resistance and PHH after RYGB.

10 Ankylosing spondylitis disease activity score (ASDAS) is associated with NSAID use over time.

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Background:
Non-steroidal anti-inflammatory drugs (NSAIDs) are the cornerstone of conventional treatment in ankylosing spondylitis (AS). In case of insufficient response, tumor necrosis factor-alpha (TNF-a) inhibitors are available. Still little is known about concomitant NSAID use.
Aim:
To investigate the longitudinal association between disease activity and NSAID use in established AS patients.

Methods:
The present analysis is part of the GLAS cohort, an ongoing longitudinal observational axial spondyloarthritis (SpA) cohort study in daily clinical practice. During 52 weeks of follow-up, NSAID use was recorded prospectively. The ASAS-NSAID index was calculated using the dosage and frequency assessed retrospectively from clinical records. Disease activity was assessed using ASDAS, BASDAI, and serum CRP levels.
Generalized estimating equations (GEE) was used to evaluate NSAID use in relation to assessments of disease activity over time. NSAID use was analyzed using 4 parameters: NSAID use (yes/no), ASAS-NSAID index, low on demand use (index ≥10 versus <10), and high use (index ≥90 versus <90). Analyses were stratified for treatment regimen: patients starting TNF-a inhibitors and patients
on conventional treatment.

Results:
Of the 393 included AS patients, 254 (66%) patients started TNF-a inhibitors and 139 (34%) patients received conventional treatment. NSAID use and disease activity reduced significantly after starting TNF-a inhibitors and remained low and stable during follow-up. In the conventional treatment group, disease activity was low and NSAID remained stable at all visits.
GEE analysis over time showed that NSAID use was significantly associated with disease activity. In the TNF-a inhibitor group, a significant association of all NSAID parameters with ASDAS was found. The association between NSAID use and ASDAS remained significant in the 217 patients who used TNF-a inhibitors more than 80% of the follow-up time and when analyzing only 12 to 52 weeks of follow-up to exclude the initial effect of TNF-a inhibitors, although the regression coefficients were lower in these last analyses. In the conventional treatment group, a significant but less prominent association of NSAID parameters with ASDAS was found.

Conclusion:
Women with AS experienced higher disease activity and worse physical function and quality of life, and men showed more spinal radiographic damage. Although women switched more often between TNF-a inhibitors, 2-year changes in clinical assessments were comparable between genders.

Notities

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