

1. The Human Gut Microbiota and its Role in Attention Deficit Hyperactivity Disorder and Autism Spectrum Disorder

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Background

More than 1000 bacterial species reside in the human gut. Together with viruses and fungi these bacterial species constitute the gut microbiota. Besides affecting gastrointestinal functions, components of the gut microbiota have been implicated in neurological functions and development. This microbiota gut-brain-axis has been linked to autism spectrum disorder (ASD). In addition, several lines of evidence indicate an association between imbalance of the gut microbiota and the development of attention deficit hyperactivity disorder (ADHD). However, the link between bacterial composition of the gut and neurodevelopmental disorders are still poorly investigated.

Methods

To investigate the association between gut microbiota and ASD/ADHD, we will collect stool and blood samples from 100 children with ADHD, 50 children with ASD, 50 children with co-occurring ADHD and ASD, and 100 siblings without ASD and ADHD. Bacterial DNA will be extracted from stool samples, and the bacterial composition analyzed using Illumina sequencing of the 16S rRNA gene. To investigate possible mechanisms by which the microbiota influence neurodevelopment, we will investigate leakage of the bacterial product lipopolysaccharide (LPS) from gut to blood, and subsequent changes in inflammatory cytokines. Finally, altered resting cortisol levels will be measured in urine. All findings will be correlated to epigenetic markers of altered gastrointestinal development, and to single nucleotide polymorphisms (SNPs) associated with ASD and/or ADHD.

Outcome

This study will describe the bacterial compositions associated with ADHD and ASD in children. We aim at providing a deeper insight in how specific bacterial compositions in the gut may influence neurodevelopmental disorders in children.

2. CT Scan Referral Redundancy in the North Denmark Region - A Retrospective Study

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Background

A tendency towards an increase in performance of CT scans has been observed in Denmark during the last two decades. In the North Denmark Region, the number of annual CT scans as augmented years from 45,203 in 2007 to 103,950 in 2016. The number of patients in Denmark being exposed to ≥ 20 CT scans annually was 40 in 2005 in comparison to 650 in 2011. A Swedish study from 2009 showed that 20 % of all CT scans were evaluated being redundant. The aim of this planned study is to determine the prevalence of redundant CT scans in the North Denmark Region.

Methods

The study investigated all abdominal scans (SKS coded UXCD) being performed in Region North Denmark in the period of November 1st 2014 until February 28th 2016.

Outcome

Data from a total of 47,686 CT scans in 27,633 patients representing the 16 months study period have been extracted from the BI Unit. In the key study population 5850 patients, a CT scan was performed minimum of two times within the eight-weeks interval. Further analytic work is now ongoing to be reported subsequently. We expect that our study will contribute with important new information regarding the prevalence of redundant CT-scans, which will provide a unique opportunity to evaluate on how the number redundant CT-scans can be diminished in order to save financial expenditures and other health resources. Furthermore, to reduce the risk of potential irradiation induced cancer.

3. Characterization of the Gut Microbiome in Newly Diagnosed Patients with Depression

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Background

The last decades have seen major advances in characterization of depression as a multifactorial disease involving both psychiatric, neurologic, immunological, endocrine and infectious causes and effects. Recently, the gut microbiota has emerged as a newly founded theory of depression development, maintenance and treatment-resistance. As antidepressants have antimicrobial properties, there is a necessary demand for a study aimed at characterizing the gut microbiota in treatment-naïve patients newly diagnosed with depression.

Methods

The microbiotic state of gut bacteria in patients with depression are characterized by 16S rRNA gene mapping. We believe the composition to result in pathologic interactions with the intestinal epithelium, which are evaluated by purifying human proteins impenetrable to the gut wall from faecal samples. The immune profile altered by dysbiotic features will be mapped by multiplexing several relevant cytokines. The increase in bacterial metabolites is believed to result in neuroinflammation. Preclinical studies are conducted by transplanting donor material into rats to confirm the clinically observed profile of the clinical subjects, as well as further characterization of intestinal epithelium protein expression and neuroinflammation.

Outcome

We expect the clinical studies to confirm the standing hypothesis of gut dysbiosis in patients developing depression, as well as lay the foundation for a broader understanding of treatment-resistance. The preclinical studies will expand the knowledge of associative factors in depression, which can be utilized in the development of alternative treatments of depression, such as augmentation of antidepressants with probiotics, faecal microbiota transplantation for optimal treatment efficacy, or other forms of bacteriotherapy.

4. The Effects of High-Intensity Interval Training on Obesity-related Complications and Inflammation in Children and Youth

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Background

In Denmark, the prevalence of overweight among children is 15-20% and obesity 5 %. Complications to obesity include among others pre-diabetes, dyslipidaemia, and fat accumulation in liver and muscles arise already in childhood. In adults, studies indicate that exceeding the fat deposition capacity in subcutaneous adipose tissue causes diseased adipose tissue (lipotoxicity), leading to a cascade of ectopic fat deposition, insulin resistance, low-grade inflammation and endothelial dysfunction. In the proposed project, we will investigate the pathological mechanisms of excess fat deposition in children with obesity and the reversibility hereof via high-intensity interval training (HIIT) and lifestyle-intervention (The Children's Obesity Clinic Treatment, TCOCT).

Methods

Fifty children with obesity will be randomised to either 3 months of HIIT and TCOCT or TCOCT alone, followed by 9 months of TCOCT. At baseline, after 3 months and 12 months, MR-images, blood sample analysis including extracellular vesicles, pro-inflammatory cytokines, insulin and glucose, and urinary markers of oxidative stress will be performed. Twenty-five normal weight children will undergo the same investigations at baseline only.

Outcome

In the children with obesity we expect to see a) more ectopic fat deposition in liver and muscles b) Lower insulin sensitivity, higher serum concentrations of pro-inflammatory cytokines and higher urinary markers of oxidative stress c) Lower muscle-mitochondrial function and endothelial dysfunction, all compared to children with normal weight. We expect that HIIT in combination with TCOCT improves these metabolic complications more than TCOCT alone after 3 months of HIIT and that these changes are maintained 1 year after baseline.

5. Uncertainty in Classification of Death Resulting from Myocardial Infarction – An Analysis of Regional Variation in Incidence and Diagnostic Support for Fatal Myocardial Infarction

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Background

Usefulness of mortality statistics relies on the reliability of death certification. However, diagnosing the causal sequence of death is not simple. We examined diagnostic support for fatal AMI and investigated its possible association to geographic variation in death from AMI.

Methods

By use of nationwide registers, we identified residents recorded with AMI as the underlying cause of death. Individual-based comparison of death certificates with patient records and claimed prescriptions were used to identify diagnostic support for AMI. Uncertainty in AMI diagnosis was used to explain spatial patterns in fatal AMI at a regional level. All rates were adjusted for age. We used multinomial logistic regression to compare factors related to AMI.

Results

The primary analysis included 36,669 residents recorded with AMI as cause of death, of whom 12,827 (35%) lacked diagnostic support for fatal AMI. Age-adjusted mortality rate ratios (MRR) showed that fatal AMI cases without supportive data were associated with major geographical variation in death from AMI, with MRR of regions varying from 1.16 (95%CI:1.02;1.31) to 1.62 (95%CI:1.43;1.83). Fatal AMI outcome without supportive data were significantly associated with younger age at death (76.2, SD: 13.3 years), fewer cardiovascular related comorbidity and death outside hospital ($P>0.0001$). Adjusted multinomial analysis, stratified on place of death, revealed significant geographical variation in fatal AMI cases occurring outside hospital [OR: 1.16 (95%CI:1.06;1.26) 1.49. (95%CI:1.94;2.27)]. No geographical differences in fatal AMI cases in hospital were observed [OR:0.96 (95%CI:0.85;1.07) 1.16 (95%CI:1.09;1.29)].

Conclusions

There is major regional variation associated with recording cause of death from a myocardial infarction. This variation is mostly derived from cases without supportive evidence.

6. The Role of Human Papillomavirus in Vulvar Cancer and Head and Neck Cancers

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Background

Human Papillomavirus (HPV) is linked to development of cancer. HPV-16 and HPV-18 are known to cause cervical cancer, constituting the basis of HPV vaccine development. Additionally, HPV has been found in other anogenital cancers and head and neck cancer, including vulvar, vaginal, penile, anal, and oropharyngeal cancer.

We have previously detected HPV-33 in 19% of HPV positive vulvar cancer or vulvar dysplasia cases, which is a much higher number than known from cervical cancer (~4%). In addition, from the literature it appears that HPV-33 is also found with high prevalence in head and neck cancer, which mainly affects men. Together this points to HPV-33 probably playing a much larger role in cancer development than previously believed. The background for this selective tissue tropism is unknown. We therefore aim to study the biology of HPV-33 – in particular on how the virus expresses its genes in different cancers and tissue types.

Methods

A systematic review of publications addressing the prevalence of HPV-33 will be conducted to investigate the impact of HPV-33 in HPV related cancers. Clinical cancer samples and cancer cell lines will be used to study the regulation of HPV-33 gene expression.

Outcome

Results from this study will provide us with a better understanding of the biology of HPV-33 in different cancers and tissue types, which in the future can lead to a better management of HPV dependent cancers. This furthermore raises a question about, whether prophylactic HPV vaccines containing HPV-33 should be offered to men. Currently, men is not included in the vaccination program.

7. Post-Intensive Care Syndrome (Pics) – A Prospective Study of Neuropsychiatric Manifestations in Patients 2 and 8 Months After Hospital Discharge

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Background

Long-term admission in an intensive care unit (ICU) is associated to physical and neuropsychiatric complications, such as depression, anxiety, PTSD, fatigue, polymyopathy and neuropathy and decreased quality of life, which is described as *Post Intensive Care Syndrome* (PICS). Risk factors involved in development of PICS are not fully known, but previous studies suggest that hypoxia, delirium, sedation, hypotension, hypoglycaemia and infection contributes to the condition. It is in our interest to study in which extend these neuropsychiatric complications are present in patients discharged from the ICU at a Danish regional hospital

Methods

Patients aged 18 to 80 years with a history of ≥ 72 hours ICU admission was offered a consultation with a ICU specialist and a nurse, followed by a neuropsychiatric evaluation. Patients with known cerebral or neuropsychiatric disease were not included in the study.

Results

The study is ongoing awaiting more patients to be included aiming at a study population of 24 patients. Preliminary findings show that the patients have several comorbidities. Patients with psychiatric comorbidities show a tendency to be more affected by depression, anxiety and PTSD, which is associated to a decrease in life quality following critical illness.

Conclusion

The preliminary findings suggest that patients suffering from critical illness has persistent complications and therefore it is important to offer a follow-up session after submission. It is necessary to do further research of the complications and consequences of long term admission to the ICU.

8. Early Multidisciplinary Screening of Dysphagia at Admission to the Emergency Department – A Pilot Study

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Background

Knowledge about effect of early dysphagia screening is limited. The aim of this study is to examine the prevalence of dysphagia in the Emergency Department (ED) population.

Methods

This study included consecutively hospitalized patients in 10 days from 2pm-10pm at the ED of North Denmark Regional Hospital. The screening took place within 2 hours of admission. Inclusion criteria were any of the following: age ≥ 65 years, neurological disorders, alcoholism, COPD, pneumonia, dyspnoea, diabetes or unexplained weight loss. A nurse screened patients with a water test and with signs of dysphagia tested by an occupational therapist with the V-VST and the MEOF-II.

Results

Of 140 eligible patients (56% male, median age 75 years) 95 (68%) were screened. It was impossible to screen 12 patients (9%) to limited time and 30 patients (21%) due to poor health condition and 5 patients (4%) declined participation. The prevalence of dysphagia in the study population was 16% (15 patients). Results from the water test were confirmed with V-VST and MEOF-II. In patients with lung related diseases or circulatory diseases was the prevalence respectively 25% and 24%. Patients, not screened due to poor health condition, were tested during hospitalisation and the prevalence of dysphagia was 75% in this group of patients.

Conclusion

The prevalence in ED patients was 16%. Patients transferred to other departments due to poor health condition had prevalence of 75%. It is possible to screen patients in the ED. The water test is a useful screening tool in an acute setting.

9. Demmi as an Indicator for Rehospitalization in Acute Geriatric Patients

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Background

A low level of mobility is an important manifestation of illness in older people and a strong prognostic factor of declining health in geriatric patients. The De Morton Mobility Index (DEMMI) is developed to identify signs of physical decline, assist with goal setting and monitor recovery. The aim of this study is to assess the mobility in acute geriatric patients and characterize those rehospitalised within 30 days of discharge.

Methods

Patients over 60 years of age hospitalized in the Department of Geriatric Medicine at the North Denmark Regional Hospital for at least 24 hours were tested with DEMMI.

Results

246 patients participated (44% male, median age 83 years (70; 94)) in the study. The mean DEMMI score was 40. The two groups were statistically significantly different according to Barthel100, Chair stand test, admission time and discharge to nursing home. We found no significant differences regarding age, gender, comorbidity or hand strength. DEMMI scores were low (≤ 40) for 67% of the patients hospitalized due to dehydration and for 82% of the patients hospitalized due to reduction in food intake but we did not find a similar pattern in DEMMI scores for patients hospitalised with pneumonia, dyspnea, infections or pain.

The rehospitalisation rate within 30 days for patients with a DEMMI score ≤ 40 was 20% versus 23% for the group of patients with a DEMMI score > 40 .

Conclusion

There is a relationship between low/high DEMMI score and Barthel-100 score, chair stand test, admission time, and discharge to nursing home.

10. Patient-Specific Musculoskeletal Modelling of Foot Orthotics Effect on Rheumatoid Arthritis Patients: Methodology

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Background

Over 85% of rheumatoid arthritis (RA) patients experience feet and ankle problems during the course of the disease. Persistent foot and ankle problems still occur after clinical remission is reached. With the intention to stabilize and align the foot, foot orthotics (FO) are commonly prescribed. A limitation of the previous literature on FO to treat RA is that it has focused exclusively on clinical outcomes of FO, while overlooking the biomechanical principles on which the rationales for FO is based.

Methods

Four early stage RA patients were recruited for this study. A pair of FO was made for each patient using a weight bearing casting technique. Bone geometry was obtained from MRI images and segmented in Mimics. Motion capture was performed with an eight-camera setup with reflective markers together with three force plates. Patient-Specific Musculoskeletal models of each patient were developed using the AnyBody Modeling System.

Results

This pilot study indicate that ankle, knee and hip joint resultant reaction forces are similar between the control and FO condition. Despite of this, a change in the different joint moments and muscle forces still occur.

Conclusion

This pilot indicate that FO can alternate the internal loading. Therefore, this modelling and experimentally data based method is a promising tool to gain insight into how FO interventions affect joint loading and muscle activity. A larger scale study is planned to investigate the biomechanical differences between different types of FO. This knowledge can potentially contribute to development of better FO and improved clinical guidelines.

11. Is Acid-base and Oxygenation Status Reflected by Triage Score?

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Introduction

Triage is conducted in most Danish emergency departments (ED) upon admission of patients. In the majority of Danish ED's the Danish Emergency Process Triage (DEPT) system is utilized. Using the venous to arterial conversion (v-TAC) method venous blood acid-base and oxygen values are converted to arterial values. The aim of this study was to investigate the congruency between triage score and abnormal mathematically arterialised acid-base and oxygen values.

Method

Patients admitted consecutively through the ED were included in this study. Patients were divided into four triage groups. Venous blood samples were obtained from all patients converted to arterial blood gas values using the v-TAC method. pH, pCO₂, pO₂, lactate, bicarbonate and base excess were compared to triage score in statistical analysis.

Results

A total of 655 patients were included. Percentages of patients with abnormal acid-base and oxygenation values in the green, yellow, orange and red triage group were 23.4%, 30.3%, 32.3% and 51.7%, respectively. pH was approximately unchanged between groups. Between the red and green triage group a difference in pCO₂ and lactate of 0.48 kPa and 0.82 mmol/L, respectively, was observed. Difference in pO₂ was 7.69 kPa between the green and red triage group.

Conclusion

Overall a congruency between triage group and abnormal acid-base and oxygenation values was observed. pCO₂, and pO₂ and lactate revealed consistency in severity mean values in accordance to the four triage groups. The possibility of improved triage group allocation with combined triage process and blood gas values should be considered in future studies.

12. Quality of Life and Sexuality on Danish Women with Lichen Sclerosus.

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Background

Lichen sclerosus (LS) is an unrecognized and misdiagnosed chronic autoimmune skin disease mainly in the anogenitale area. The condition occurs primarily in prepuberts girls and in peri- and postmenopausal women. LS often results in a significant change in the woman's vulva, characterized by anatomical changes as well as narrowing of vagina entrance. The prevalence and etiology is unknown, but in up to 17% of cases, a hereditary factor is seen. In 6 months, 299 patients were diagnosed with LS in North Denmark Regional Hospital. A few studies describe how LS affects women's everyday life, quality of life (QoL) and sexuality.

Purpose

identify which problems women with LS may experience in their everyday life evaluate the quality of life and sexuality of women diagnosed with LS treated by a gynecologist, a nurse and clinical sexologist versus women with LS treated by a gynecologist and nurse uncover the health-economic consequences of the two different treatments

Methods

A randomized intervention on 144 patients either with a gynecologist, a clinical sexologist and a nurse or usual care with a gynecologist and a nurse. The intervention group will be diagnosed and treated by the gynecologist, 6-8 interventions with the clinical sexologist and a follow up by the nurse after 3 months. To measure the QoL and sexuality, the women fill out the Dermatology and QoL Index and the Female Sexual Function Index. Health economy will be measured with EQ-5D before intervention and after 6 months.

Outcome

Result will be presented in 2019.

13. Brain State Dependent Peripheral Nerve Stimulation Promotes Neuroplasticity and Improves Functional Recovery in the Sub-acute Phase of Stroke

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Background

An innovative Brain-Computer-Interface (BCI) system that empowers chronic stroke patients to control an artificial activation of their lower limb muscle through task specific motor intent has demonstrated significant functional improvements. In the current study it was applied to acute stroke patients.

Methods

The system consists in detecting the movement-related cortical potential (MRCP) using scalp electrodes as the patient attempts to perform a dorsiflexion task. This is translated into the control command for an electrical stimulator to generate a stimulus to the nerve that innervates and thus activates the prime mover (tibialis anterior). This activation is precisely and individually timed such that the sensory signal arising from the stimulation reaches the motor cortex during its maximum activation due to the intention. Thirty pairings were performed in 12 sessions across 4 weeks. Outcome measures included the motor evoked potential and Fugl-Meyer scale for lower limb.

Results

The intervention group significantly improved function with respect to a control group as assessed by the lower extremity Fugl-Meyer scale. All patients were able to perform the intervention with minimal training and very few repetitions, making this a feasible new efficient approach for restoration of motor function in stroke patients.

Conclusion

Such few necessary applications of the protocol make it a unique approach in comparison to available techniques and paves the way for at home use devices.

14. Patient Satisfaction with Propofol Versus Midazolam for Sedation During Colonoscopy

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Background

Colonoscopy investigates colonic symptoms and screen for cancer and polyps. A colonoscopy can be painful and uncomfortable experience and therefore it is relevant to find the ideal sedation.

The aim was to determine the patients' satisfaction with propofol or midazolam sedation both combined with rapifen. The secondary outcome was time required for performing the procedure, post procedure recovery and discharge time.

Methods

203 patients were enrolled and randomised into a propofol group (PG) with 98 patients (mean age 57 years, 61% female) and a midazolam group (MG) with 105 patients (mean age 62 years, 58% female). Inclusion criteria: surgical outpatients' age ≥ 18 and referred to ambulant colonoscopy. Exclusion criteria: ASA classification > 3 and, patients who had both colonoscopy and gastroscopy at the same day. Patients and physicians/endoscopists completed a questionnaire right after examination. Collected data: age, gender, ASA class, VAS-score, patient satisfaction and willingness to undergo another colonoscopy. Physician's experience with the patient cooperation during the examination, procedure duration and discharge time.

Results

VAS-score mean 2.3 in the PG and 4.4 in MG ($p > 0.001$). Mean rapifen dose 0.94 mg in PG versus 0.63 mg in MG ($p > 0.001$). There were no significant difference in procedure time or discharge time. The physicians' experience with the patient cooperation during the procedure was very easy in PG 47 (48.0%) versus 34 (32.4%) in MG.

Conclusion

Propofol for sedation during colonoscopy for surgical outpatient's can lead to increased patient satisfaction, less pain during the procedure as well as an improved physician-patient cooperation during the colonoscopy.

15. Eating Difficulties in Acute Geriatric Patients are Associated with Poor Nutritional Status and Reduced Activities of Daily Living

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Background

Eating difficulties in acute geriatric patients are associated with poor nutritional status and limitations in activities of daily living. The aim of this study was to test the association between eating difficulties and nutritional status and activity of daily living in a geriatric population.

Methods

A cross-sectional study conducted between March and September 2016. Eating difficulties were assessed using the Minimal Eating Observation Form (MEOF-II), including observations related to ingestion, deglutition and energy/appetite. Eating difficulties were determined on the basis of one or more components of the MEOF-II. Poor nutritional status was defined as age-specific low body mass index (BMI), $<20 \text{ kg/m}^2$ if <70 years, or $<22 \text{ kg/m}^2$ if ≥ 70 years. Activity of daily living was assessed using the Barthel Index and defined as low (<50) or high (50-100).

Results

297 acute geriatric patients were included; mean age was 83.0 (± 7.7) years and 56.2% were female. The prevalence of eating difficulties was 54.9%. Mean BMI was 26.1 (± 5.6) and median Barthel Index was 47 (30-58).

Patients with normal/high BMI had a risk reduction of 37% in eating difficulties, compared to patients with age-specific low BMI ($p=0.003$). Patients with a high activity of daily living had a risk reduction of 39% in eating difficulties, compared to patients with low activity of daily living ($p<0.001$).

Conclusion

Eating difficulties are highly prevalent in geriatric patients and associated with poor nutritional status and reduced activities in daily living. Identification of eating difficulties may be important to preserve nutritional status and functioning in the geriatric population.

16. Citrullination in the Pathogenesis of Polymyalgia Rheumatica

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Background

Citrullination is the enzymatic deamidation of arginine to citrulline catalysed by the PAD enzymes. Citrullination has mostly been studied in rheumatoid arthritis (RA) and has been proposed to initiate in the oral cavity or the lungs. Amongst others, the process alters the immune response with presentation of citrullinated self-peptides to T-cells and with increased interactions within the binding pocket (shared epitope) of HLA class II molecules. Several proteins have been shown to elicit an increased immunogenicity as citrullinated self-peptides in RA. However, citrullination has not been reported in polymyalgia rheumatica (PMR). This study aims to investigate the presence of citrullination in PMR.

Methods

Samples from RA, PMR (before and after drug administration), and healthy controls were obtained. State-of-the-art proteomics approaches was applied, including tandem mass spectrometry and PEAKS Studio version 8.0.

Results

The total of 43 peptides were found citrullinated and unequally distributed across the four study groups with 214 (RA), 271 (PMR groups in total), and 133 (controls) peptides present. The distribution of the citrullinated peptides were similar between the PMR groups, and the controls. High abundant serum proteins such as albumin and immunoglobulin were similar citrullinated across the samples. Serum amyloid A1 protein (SAA1), was found citrullinated in more samples for the PMR before treatment group compared to RA and controls.

Conclusion

The total of 43 different peptides were found citrullinated across the study groups without any previously reported citrullinated proteins. The peptides were not unique but distributed across the study groups as common serum proteins. Further analysis are needed.

17. Disease Activity and Treatment Response Biomarkers in Polymyalgia Rheumatica and Rheumatoid Arthritis

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Background

Rheumatoid arthritis (RA) and polymyalgia rheumatica (PMR) are two common rheumatic diseases known for their highly inflammatory responses. Despite an increasing knowledge of the pathogenesis and treatment responses much is still inadequately understood. Hence, the stratification of rheumatic diseases has been challenging with few usable biomarkers craving the need for further investigation. The study aimed to investigate RA and PMR for new potential disease and treatment response biomarkers in the attempt to stratify rheumatic diseases.

Methods

RA and PMR patient samples were obtained before and after administration of therapeutics. Healthy age-matched controls were included. State-of-the-art proteomics approaches were applied, including electrochemiluminescence and tandem mass spectrometry.

Results

Serum amyloid A1 protein (SAA1) was found statistical significantly downregulated and upregulated for PMR (treatment response) and RA (disease activity), respectively. Statistical significance between RA and controls was found for IFN- γ , IL-6, TNF- α , and IL-10. IFN- γ and IL-6 were statistically significant between the two PMR groups, and IFN- γ statistically significant between PMR after treatment and controls. However, TNF- α did not respond statistical significantly between the two PMR groups.

Conclusion

SAA1 correlates with treatment response alongside with the cytokine profile. However, SAA1 seems not to contribute significantly to existing clinical procedures. IL6 and INF γ would be useful as they respond more accurately. Interestingly, TNF- α did not respond to treatment. The project highlights the need for motivate rheumatic research towards high-throughput and in-depth investigation.

18. Travelling with Arthritis: A Cross Sectional Analysis of Danish Arthritis Patients Treated with Biologics

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Background

Our aim was to describe the travel patterns, the extent of pre-travel advice, travel insurance, vaccinations, adherence to biological treatment during travel, and self-reported health related problems encountered by arthritis patients in biologic treatment during their travel.

Methods

The department cares for 400 patients treated with biological medicine for inflammatory diseases. Over a sixth month period was a questionnaire handed out to 236 consecutive patients.

Results

A total of 219 included in the study. Median age was years 56, and 49% were females. One hundred and sixty three ($163/219 = 74\%$) travelled outside of Denmark and 70 ($70/163=43\%$) of those outside of Europe. Pre-travel advice was sought by 38 ($38/163=23\%$) and travel insurance was taken out by 137 ($137/163=84\%$). However, 85 ($85/137=62\%$) did not inform the insurance company about treatment with biologics. Sixty-five ($65/163=40\%$) continued to take biologics, 33 ($33/163=20\%$) had stopped before and 8 ($8/163=5\%$) during the travel. Only 11 ($11/163=7\%$) have experienced minor health problems and properly not related to travelling. Only 2 of the 163 travelling patients were hospitalized (diarrhea, deep-vein thrombosis). 10 (6%) were given extra travel vaccination.

Conclusion

Danish arthritis patients in treatment with biologics travel frequently outside of Denmark. Health-problems and treatment were not reported to be major problems, neither did travel vaccinations. Hospitalization during travel was infrequent and not related to arthritis or biological treatment. The study showed that the main problems encountered were failure to seek pre-travel advice and the lack of disclosure regarding biologics while seeking travel insurance.

19. Infarct Size Assessed by Cardiac Mri is Correlated to Echocardiographic Two-Dimensional Speckle Tracking Longitudinal Strain but not Left Ventricular Ejection Fraction in the Early Stage of Acute Myocardial Infarction

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Background

Global Longitudinal Strain (GLS) early after myocardial infarction is a stronger predictor of short and long-term outcome than left ventricular ejection fraction (LVEF). Cardiac MRI (Magnetic Resonance Imaging) has the ability to detect and quantify myocardial infarct size accurately. The aim of this study was to test the hypothesis that infarct size was correlated to GLS in the early stage of acute myocardial infarction.

Methods

Patients with ST-segment elevation myocardial infarction who underwent primary percutaneous coronary intervention were assessed with cardiac MRI and transthoracic echocardiography within one week from hospital admission. Two-dimensional speckle tracking was performed using a semi-automatic algorithm (EchoPac, GE Healthcare). Longitudinal strain curves were generated in a 17 segment model covering the entire left ventricular myocardium. GLS was calculated automatically as the mean of the global peak systolic strain in the three apical standard views. LVEF was measured by auto-EF in EchoPac. Infarct size was measured by late gadolinium enhancement cardiac MRI.

Results

The study population consisted of 49 patients (age 60.4 ± 9.7 years; 95% males). Infarct size was not correlated to LVEF (Pearson correlation $r = -0.22$, $p = 1.9$). Infarct size was significantly correlated to GLS ($r = 0.69$, $p = 0.05$). At segmental level, the strongest correlation between infarct size and GLS was found in the apical segments ($r = 0.69$, $p < 0.001$).

Conclusion

In the early stage of acute myocardial infarction, GLS is a stronger marker of infarct size than LVEF. The correlation between infarct size and GLS was strongest in the apical part of left ventricle.

20. New Psychoactive Substances Require a Paradigm Shift in Drugs-of-Abuse Testing

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Background

The emergence of an increasing number of new psychoactive substances (NPS) on the drug market is a persistent problem for public health in Europe. There are serious concerns over the harmful effects related to NPS sold online on the internet as 'research chemicals', 'legal highs' and 'herbal blends'. The most harmful substances, in particular synthetic opioids and synthetic cannabinoids, have caused intoxications and outbreaks of death amongst users. At present, more than 620 substances are being monitored by the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA). This poster presents the current status for clinical drugs-of-abuse testing in Denmark.

Status for clinical drugs-of-abuse testing

Guidelines for urine drugs-of-abuse testing have not been fully implemented, testing is poorly coordinated between regions in Denmark and on-site immunoassay testing still plays a major role, although this technique is obsolete. In worst case, the use of NPS can remain undetected in emergency departments, prisons and psychiatric treatment. Thus, the prevalence of NPS use in the Danish population is largely unknown. More research is needed in this field to provide a better understanding of this drug problem and promote health amongst users.

Conclusion

Clinical toxicological analysis and forensic investigations may overlook NPS, as new compounds emerge at a growing rate. This new NPS scenario require a paradigm shift in drugs-of-abuse testing, involving all fundamental procedures from improvement of analytical methods to post-analytical interpretation of results. The future drugs-of-abuse laboratory must be based on mass spectrometry as the major tool for providing precise and accurate confirmatory results.

21. Insufficiency Fractures in Knee and Ankle in Patients with Rheumatoid Arthritis and Treatment with Person-Specific Foot Orthotics

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Background

In Department of Rheumatology we have identified 28 patients with rheumatoid arthritis (RA) where new onset knee or ankle pain without prior trauma was misinterpreted as arthritis activity by the clinicians, but was later shown to be due to insufficiency fractures. The fractures were not visible on conventional X-ray examination, but could be seen on additional MRI examination.

The aim of this study is to describe the frequency of and present some clinical findings in patients with rheumatoid arthritis who were diagnosed with insufficiency fracture in knee or ankle in a medium-sized Danish Department of Rheumatology since 2010.

Methods

28 patients with RA and insufficiency fractures in the ankle or knee will be thoroughly characterized by clinical interviews and examinations, medical history, blood samples, DXA scans and MRI scans. These findings will be compared with results from two control groups of 28 patients with RA and Chronic Obstructive Pulmonary Disease (COPD) matched by sex, age, disease duration and prior accumulated glucocorticoid treatment. All patients with RA will besides the usual treatment get patient-specific foot orthotics to investigate the effect on pain, postural control, gait mechanics and mobility after three months use in the gait laboratory at Aalborg University.

Outcomes

This project can potentially improve clinical guidelines and help clinicians to prevent, diagnose and treat patients with RA with foot pain and insufficiency fractures in knee and ankle better in the future. Further, can the technical approach potentially be used as an essential tool in the development of better foot orthotics for patients.

22. Study of Vasomotion in the Peripheral Circulation with Infrared Thermography

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Background

Until now the relationship between systemic hemodynamic variables and microcirculation is not elucidated and has been scarcely investigated. Skin infrared imaging studies with high sensitivity cameras have revealed flow motion as temperature micro oscillations in three frequency ranges: 0.005-0.0095 Hz, 0.0095-0.02 Hz, and 0.02-0.06 Hz, that are related to endothelium-derived hyperpolarizing factor (EDHF), endothelial release of nitric oxide, and sympathetic activity, respectively. The objective of this study is to investigate how blood flow restriction in the arm will affect these temperature microoscillations.

Methods

Prospective observational study with 8 healthy volunteers. Infrared recordings will be done on the skin of the dominant hand under two conditions: first recording for 20 minutes under normal conditions and second recording after blood flow restriction in the arm with the aid of a pressure cuff inflated at 40% of the total occlusion pressure for the subject. The power spectrum in each of the three frequency ranges of interest will be calculated for each pixel in the designated regions of interest in the skin of the dorsum of the hand. This analysis will permit quantification of vasomotion in the two experimental conditons.

Outcomes

The study is in progress but we expect that the power spectrum of the thermal microoscillations in the regions of interest will be deeply affected by the blood flow restriction at arm level.

23. The Cumulated Ambulation Score As A Predictor Of Mortality And Readmission In Patients With Hip Fracture

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Background

Poor basic mobility at discharge has been associated with increased mortality and readmission in patients with hip fractures. The aim of this study was to investigate whether independent performance or inability to perform the tasks of the Cumulated Ambulation Score (CAS) predicts mortality and/or readmission after hip fracture.

Methods

From June 2015 to May 2016, 220 consecutive patients (76% female, median age 85 (78-89 IQR)) with first time hip fractures and age >65 admitted to the Department of Orthopedic Surgery at North Denmark Regional Hospital were included. Exclusion criteria were residence outside the North Denmark Region, death during admission or unattained information regarding CAS at discharge. Basic mobility was assessed at discharge using CAS. Outcome: 30 and 180-days mortality and 30-days readmission.

Results

Getting out of bed at discharge: independently 36.8%, supported 56.8% and unable 6.4%. Rising from a chair: independently 49.6%, supported 42.7% and unable 7.7%. Walking: independently 43.2%, supported 39.1% and unable 17.7%. Patients performing the tasks of CAS independently at discharge did not die within 30 days after discharge. Unable performances of CAS at discharge crudely predicts 30-days mortality. Inability to perform the tasks of CAS and age >85 predicts 180-days mortality. No significant association between the performance of the tasks of CAS at discharge and 30-days readmission were found.

Conclusion

Inability to perform the separate tasks of CAS predicts mortality in patients with hip fractures. Age >85 predicts 180-days mortality regardless of functional status at discharge. Functional status at discharge does not predict 30-days readmission.

24. Predictors of Basic Mobility Skills at Discharge in 235 Patients with Hip Fracture

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Background

Lack of ability in basic mobility skills is associated with increased mortality in patients with hip fractures. The aim of this study was to identify predictors for performing basic mobility skills at discharge.

Methods

From June 2015 to May 2016, 235 consecutive patients (76% female, median age 85 (78-89 IQR)) admitted to the Department of Orthopedic Surgery at North Denmark Regional Hospital were included. Basic mobility was assessed at discharge using the Cumulated Ambulation Score (CAS). A total score of 6 indicates independence in basic mobility. Inclusion was restricted to first time hip fractures and age ≥ 65 . Exclusion criteria were death during admission or unrecorded CAS at discharge.

Results

Before surgery 90.6% were independent in basic mobility (CAS=6). Getting out of bed at discharge: independently 37.5%, supported 56.5% and unable 6.0%. Rising from a chair: independently 49.8%, supported 43% and unable 7.2%. Walking: independently 43.8%, supported 38.3% and unable 17.9%. A total of 79 (33.6%) patients achieved independence in all tasks (CAS=6) at discharge. Independence in: 1) getting in and out of bed, 2) rising from a chair, and 3) walking, respectively had significant association with advanced age, length of stay and Charlson Comorbidity Index >0 . Advanced age was the only variable significantly associated with inability to perform each task of CAS.

Conclusion

Elderly patients with comorbidities are at risk of reduced independence in activities of basic mobility at discharge and should receive extra attention in rehabilitation.

25. An Empirical Approach to Personalized Rheumatic Medicine Reduces the Patient Cost of Biological Treatment

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Background

For the past six years, we have attempted to reduce the dosage of biological disease-modifying-anti-arthritis-drugs (bDMARDs) and prolonging the interval between dosages. This study presents a health-economics approach to analyze the results of this effort. This was done by evaluating the patient cost per year as the end measure.

Methods

The individualized treatment regime ensures that the individual patient remains appropriately treated based on DAS28-CRP for RA, and PsA or BASDAI for SpA. We tested this by reducing the dose or increasing the interval between doses for adequately treated patient with evidence of one full year in remission. The analysis included statistical analysis on all patients ever administered bDMARD at our department from 2001 to 2015. The treatment cost per patient was modeled and analyzed using interrupted time series regression, and generalized additive modeling.

Results

925 biological treatments were reported for the bDMARD patient population. The annual cost per patient was confirmed to be statistically significantly less after the introduction of the intervention for RA, PsA, and SpA patients with both modeling methods. The treatment efficiency was not impaired by decreased use of bDMARD. In addition, the package price of the bDMARDs did not interfere with the results.

Conclusion

We have introduced a strategy that is easy to implement in any clinic or department of rheumatology, which results in a reduction of patient cost per year. Though this study was not a controlled trial or true cost-per-qaly analysis, the results point toward a huge potential for reducing bDMARD doses.

26. Glucocorticoid Responsive Biomarkers in Polymyalgia Rheumatica

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Background

Polymyalgia rheumatica (PMR) is a systemic inflammatory disorder with unknown etiology and overlapping symptoms with giant cell arthritis and rheumatoid arthritis (RA). The proteomic profile of PMR patients remains uncharacterized and the number of biomarker studies very limited. The primary aim of this study was to thoroughly investigate the serum proteome during glucocorticoid treatment of PMR with a focus on acute-phase reactions, complement system, and pro-inflammatory cytokines.

Methods

Serum proteome profiling, cell free DNA (cfDNA) measurement, and 10plex cytokine assay were applied to PMR serum samples from patients before and after treatment, DMARD-naïve RA patients, and healthy controls.

Results

The core serum proteomes of the four patient groups consisted of 100-200 proteins, which included acute-phase reactants, coagulation and complement proteins, immunoglobulins, and apolipoproteins. Acute-Phase Serum Amyloid A (SAA1) was differentially less abundant after PMR treatment. cfDNA were more abundant in both groups of PMR compared to healthy controls. Complement factors were narrowly distributed and not affected by PMR treatment. The individual serum proteome of each PMR patient provided more than 100 differentially abundant proteins, and highlights the heterogeneity of patient groups. IL6 and IFN- γ was significantly affected by glucocorticoid treatment in opposite directions. A total of 43 citrullinated epitopes were identified making this post translational modification very common in PMR.

Conclusion

We have established the core serum proteome of PMR in response to glucocorticoid treatment, and compared it with RA and healthy controls. The results suggest a responsive role of SAA1, cfDNA, IL6 and IFN- γ to the treatment of PMR.

27. Thoracic Spine Radiographic Evaluation using Breathing Technique with Variable Exposure Time - A Randomized Clinical Study

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Background

Thoracic spine radiological imaging in patients with suspected compression fractures, degenerative or rheumatological disorders, is usually obtained with automatic exposure control and suspended expiration. This technique is widely used but the diagnostic value of the images obtained often decreases. The breathing technique from the other hand combines a long exposure time with gentle patient breathing in order to blur soft tissues so to provide better bony details. Although the breathing technique is known as a better choice when detailed bone imaging is aimed, statistical evidence regarding the superiority of breathing technique is lacking. This study aims to determine if breathing technique with variable exposure time can improve the quality of thoracic spine radiological imaging.

Methods

This is an antero-prospective study of 400 patients randomized in four groups by REDCap randomization module. Two radiologist evaluate the images obtained and fulfill an evaluation form. A pilot-study of 40 patient was performed prior to the main study in order to establish inclusion criteria, technique, determine the evaluation form and define the optimal design of the project. The research project is under supervision of Center for Clinical Research of Regionshospital Nordjylland.

Results

The project is still in progress so there are not statistically significant results. Data collection is expected to end in February 2018.

Conclusions

The project will provide new knowledge about the importance of respiration and exposure time in the x-ray examination of thoracic spine making possible to choose the optimal method and thus improve the correct diagnosis.

28. The Urinary Microbiome in Pre- and Postmenopausal Women

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Background

Until recently, the bladder was thought to be sterile; however, with emerging techniques, studies have shown that the healthy bladder contains a large and varied abundance of bacteria. The exact role of these bacteria is poorly understood, but it is believed that they may be important in maintaining a healthy bladder. The normal bacterial composition (microbiota) of the bladder and the effects of normal changes, like age or hormonal alterations during menopause, is not well defined. Looking at women with bladder symptoms, like Urge Urinary Incontinence (UUI), it is more frequently seen in postmenopausal women. Some of these women respond positively to local estrogen treatment, indicating that the absence of estrogen could have an influence on the bladder. Our hypothesis is that the bacterial composition in the bladder changes concurrently with changes in age and hormone levels in women, and that this may increase the risk of bacterial dysbiosis, resulting in unwanted bladder symptoms. This study therefore aims to investigate and compare the normal bacterial composition in urine of pre- and post-menopausal women without bladder symptoms.

Methods

For this purpose, we will collect urine samples from 50 premenopausal and 50 postmenopausal women with no bladder symptoms. Total bacterial DNA will be extracted and investigated using 16S rRNA gene sequencing.

Results and Conclusion

This study will describe the differences in the urinary microbiota between pre- and postmenopausal women. This is done to describe a baseline for the urinary microbiota to use in future studies on women suffering from UUI.

29. The Prevalence of Oropharyngeal Dysphagia in Acute Geriatric Patients

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Background

Oropharyngeal dysphagia (OD) is underdiagnosed and undertreated in many geriatric centres. The aim of this study was to explore the prevalence of OD in patients admitted to a geriatric department.

Methods

A total of 313 consecutive patients (44.1% male, mean age 83.1 years (SD 7.8)) hospitalized in the geriatric department from the 1st of March 2016 to the 31st of August 2016 at North Denmark Regional Hospital were included in this study. The volume-viscosity swallow test and the Minimal Eating Observation Form-II were conducted to assess OD. All patients with OD got a rehabilitation plan by discharge.

Results

A total of 50% patients had OD. Within the group of patients with OD, there was a significant larger amount of patients who lived in nursing homes ($P=0.004$), had a higher BMI ($P<0.001$), increased DEMMI score ($P<0.001$), fewer repetitions in 30 sec. chair stand ($P=0.001$), less circumference of arm ($P=0.001$) and leg ($P=0.001$) versus not-OD patients. There was no significant difference according to Charlson Comorbidity Index, handgrip strength or Barthel100. Patients with OD presented an increased length of stay in hospital with 0.8 day. The mortality rate was higher, 48 patients with OD died within 30 days after discharge versus 23 not having OD. The frequency of rehospitalisation between the two groups was equal

Conclusion

Patients in an acute geriatric setting are in high risk of OD, and the mortality is very high: 31% within 30 days after discharge. The frequency of rehospitalisation was equal between the two groups, which may be due to the rehabilitation plan and follow up in their residence.

30. The Economic Burden of Dysphagia in Geriatric Patients

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Background

The prevalence of dysphagia is high in the elderly. The aim of this study was to estimate the cost burden of dysphagia in geriatric patients.

Methods

A retrospective cost analysis of geriatric patients with dysphagia versus geriatric patients without dysphagia one year before hospitalization was conducted in a cooperation between the North Denmark Regional Hospital and the municipalities of Hjørring, Frederikshavn and Brønderslev. 258 hospitalized patients, ≥ 60 years, acute hospitalized in the geriatric department participated. Volume-viscosity swallow test and the Minimal Eating Observation Form-II were conducted for data collection. A Charlson Comorbidity Index Score measured comorbidity and functional status was measured by Barthel-100. To investigate the cost burden of dysphagia, patient specific data on health care consumption at the hospital and in the municipality were collected from medical registers and records one year before hospitalization including the hospitalization for screening for dysphagia. Multiple linear regression analyses were conducted to determine the relationship between dysphagia and hospital and municipality costs, respectively, adjusting for age, gender, and comorbidity.

Results

Patients with dysphagia are significantly more costly than patients without dysphagia in both hospital ($p=0.013$) and municipality costs ($p=0.028$) compared to patients without dysphagia. Adjusted, annual hospital costs in patients with dysphagia were 27,347 DKK (3,677 EUR, 4,282 USD) higher than patients without dysphagia at the hospital, and annual health care costs in the municipality were 46,044 DKK (6,192 EUR, 7,209 USD) higher.

Conclusion

Geriatric patients with dysphagia are significantly more costly for both hospital and municipality costs compared to geriatric patients without dysphagia.

31. Comparison of Ultrasound Elastography with Chest X-Ray and Computer Tomography for Diagnostical Differentiation of Tumours in the Lungs

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Background

The ultrasound examination of the lungs is considered limited as the lungs contain the air which impedes ultrasound waves. However, it is now a gold standard for assessment and guidance drainage of the pleural fluid. If the cause of pleural fluid is atelectasis in the lung secondary to lung tumour or infectious infiltrate neither chest X ray nor CT can be precise to clarify the cause. Atelectasis due to 1. lung tumours which blocks the air flow or due to 2. infectious infiltrate which cause cellular infiltration result in changes in lung tissue elasticity. Ultrasound elastography (UE) is a new imaging technique that can detect tissue stiffness in response to applied mechanical force (compression or shear wave). It proved effective in assessment of liver fibrosis, and there are promising results in diagnostics of breast, prostate, lymph node tumors. There are no publications regarding potential usefulness of UE in diagnostics of pathology in the lung. It is not possible to use direct compression but it seems possible to use shear wave which we have chosen.

Methods

2-year prospective study where all hospitalized patients (expected 50-60 per year) with pleural fluid and atelectasis are examined with a standard protocol plus shear wave ultrasound elastography.

Outcomes

Data are awaiting. We assume that it is possible to measure lung elasticity in the affected lung, there is a difference in lung tissue elasticity depending on the cause of atelectasis, and the above can be used to differentiate lung tumor from infectious infiltrate.

32. Translation and Validation of International Consultation on Incontinence Questionnaire – Vaginal Symptoms (Iciq-Vs) into Danish

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Background

To translate and validate the questionnaire ICIQ-VS into Danish. The questionnaire is designed to evaluate subjective symptoms in women with genital prolapse and consists of 14 questions regarding vaginal symptoms, sexual matters and quality of life.

Methods

The English version of the questionnaire was translated into Danish according to international guidelines. Women with and without prolapse completed the questionnaire and underwent a Pelvic Organ Prolapse Quantification (POP-Q) examination. A re-test was performed 2-3 weeks after the initial test. Women undergoing prolapse surgery also completed the questionnaire 3 months postoperatively.

Results

Initially seven women underwent a semi-structured interview showing no misunderstandings of the Danish questionnaire. In all, 192 women (94 with and 98 without prolapse) were included in the study, 52 underwent prolapse surgery. Re-test response rate was 83-95%. Mean time between test and re-test were 28.4 days and from surgery to re-test 94.2 days. Missing data ranged between 0-1%. Test-retest reliability was good to excellent (ICC 0.63-0.90) and internal consistency was acceptable (Cronbach's alfa 0.785-0.842). The questionnaire was perfect in order to distinguish between women with and without prolapse (construct validity) ($p < 0.001$) Criterion validity (correlation between POP-Q stage and the questionnaire) was perfect ($p < 0.001$). Sensitivity to change (before and after surgery) was excellent for vaginal symptom score and quality of life ($p < 0.001$) but not for sexual matters ($p = 0.059$).

Conclusion

The Danish version of ICIQ-VS was successfully translated and validated and can be a valuable tool in Danish prolapse research and in daily clinical evaluation of patients.

33. Infektionsbeskyttelse hos Immunsupprimerede Patienter - En Tværsnitsundersøgelse af Reumatologiske Patienter i Biologisk Behandling

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Baggrund

Patienter med autoimmune inflammatoriske reumatologiske sygdomme (AIRD) såsom reumatoid artrit, har øget risiko for infektioner. Dette skyldes dels den reumatologiske grundsygdom, dels behandling med eksempelvis biologiske lægemidler. Man kan derfor overveje vaccination hos disse patienter. På Reumatologisk Afdeling i Hjørring har man siden 2009 vaccineret mod de kapselbærende bakterier *Streptococcus Pneumoniae* (pneumokokker) inden opstart af biologisk behandling, men der findes ingen standardiserede retningslinjer for vaccination af patienter med AIRD. Vi ønsker nu at finde ud af hvor mange af de reumatologiske patienter i biologisk behandling, der har et beskyttende niveau af antistoffer mod pneumokokker, samt at identificere faktorer af betydning for vaccinationsresponsen og for varighed af vaccinationen.

Metode

Inkluderbare patienter er de ca. 400 reumatologiske patienter der per 01.03.2017 er i aktiv biologisk behandling. De vil bestå af både vaccinerede og ikke-vaccinerede patienter. Alle patienterne får målt antistoffer mod pneumokokker.

Resultater

Der er foreløbig målt antistoffer mod pneumokokker på 200 patienter. Af de 200 patienter har 170 (85%) et ikke-beskyttende niveau af antistoffer mod pneumokokker og 30 har et beskyttende niveau af antistoffer. Blot 32% af de patienter der tidligere er vaccineret har et beskyttende niveau af antistoffer mod pneumokokker i forhold til 1% af de patienter der ikke tidligere er vaccineret.

Konklusion

De foreløbige data tyder på, at færre end forventet af de tidligere vaccinerede reumatologiske patienter, har et beskyttende niveau af antistoffer mod pneumokokker.

34. Med Sorgen i Skoletasken

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Baggrund

Det er hårdt at håndtere en ungdomsuddannelse i et hverdagsliv med en alvorligt syg og døende forælder. Kravene på ungdomsuddannelserne er store, og for nogle elever ender det med, at de helt dropper ud af uddannelsen, idet det kan være svært at tage sig sammen til at komme i skole, lave lektier og være social, når ens livsverden er truet af tab.

Formål

Formålet med undersøgelsen er at styrke indsatsen i forhold til fremtidsmuligheder for unge på ungdomsuddannelser, hvis mor eller far er alvorligt syg og døende.

Metode

Kvalitativt projekt forankret inden for en fænomenologisk-hermeneutisk forståelsesramme. Inklusionskriterier: Unge med en igangværende ungdomsuddannelse og en forælder, der er alvorligt syg/døende.

Projektet foregår i 2 faser:

1. fase: Undersøgellesfase. Der inkluderes 12-16 unge, metodevalget er forskningsinterviewet
2. fase: Intervention. Ud fra analysen af interviewene vælges og igangsættes indsatser på uddannelsesstederne.

Resultater

Projektet er igangværende i første fase, der er gennemført 6 interviews, og resultaterne er derfor foreløbige. Der ses gennemgående temaer som:

- Sorgens rum på en ungdomsuddannelse
- Hvor skal man være – på uddannelsen eller hjemme?
- Angsten for at tabe ansigt og rolle
- Behovet for skolens/lærerens støtte

De 6 unge mennesker i projektet er/var alle i gang med gymnasiet eller EUX. Én af de unge er droppet ud af sin uddannelse.

LATE BREAKER

35. Procalcitonin as a Combined Diagnostic and Prognostic Biomarker in Acute Appendicitis – A Prospective Study

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Background

Acute appendicitis (AA) is described in accordance to findings as inflamed, gangrenous, perforation with localized free fluid/diffuse peritonitis, perforated with regional abscess. Procalcitonin (PCT) level increases in patients with sepsis and other clinically significant bacterial infections. PCT is considered test-positive above 0.5 ng/ml. PCT has been reported as potential diagnostic biomarker in appendicitis. The aim of the study is to test procalcitonin (PCT) as combined diagnostic and prognostic disease marker.

Methods

Patients of all ages admitted to the emergency department (ED) with acute abdomen will systematically be included in the study during a 3 months observation period with emphasis on patients undergoing laparoscopy under clinical suspicion of acute appendicitis. PCT will be measured in blood in a blind manner in conjunction with other laboratory analysis, including leukocytes and CRP. Final diagnostic category of acute appendicitis is based upon outcome of histopathological examination. Clinical data, including antibiotics, duration of admission/readmission, need of follow-up surgical procedure, will be compared to PCT results.

Outcomes

The study will be conducted in the beginning of 2018 at the North Denmark Regional Hospital and data will subsequently be analyzed. It is estimated that more than 200 eligible patients will be included in the overall data analysis. It is expected that the study collect new information on the usefulness of PCT as a supplementary diagnostic and prognostic tool in management of patients admitted under suspicion of acute appendicitis.

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