Abstracts

Forskningsseminar 2025

I forbindelse med årets Forskningsseminar har Forskningsavdelingen oppfordret alle stipendiater og forskere til å sende inn et abstrakt for økt synliggjøring av forskningen som foregår ved Sykehuset Østfold. Her får dere presentert alle innkomne bidrag og vi ber om at innholdet ikke deles/publiseres videre.

Abstraktene har blitt evaluert av en jury og noen av kandidatene har blitt plukket ut til å få presentere sitt abstrakt på seminaret. Juryen vil evaluere den populærvitenskapelige presentasjonen under Forskningsseminaret og de to kandidatene med høyest sum vil motta en pris fra Forskningsstiftelsen.

Innhold

Ann-Chatrin Linqvist Leonardsen

A sustainable APN workforce in future healthcare

Background: The International Council of Nurses (ICN) defines Nurse Anesthetists (NAs) as one of few Advanced Practice Nurse (APN) roles. The NA education, context, and scope of practice vary. State legislators are influenced by factors other than evidence to make policy decisions for NAs. Here, the NA will be used to illustrate the development of APN roles, and factors that may impact these in the future.

Methods: 1) a cross-sectional study conducted in 1979, 1989, 1999 and 2018, examining NA's scope of practice (N=2171)[5], 2) a qualitative study exploring NAs' (n=9) and anesthetists' (n=9) perspectives on digital anesthesia information management systems (AIMS)[6], and 3) a cross-sectional study on professional developers' (n=60) and managers' (n=30) experiences with NAs with master's degree[7].

Results: The scope of NAs' practice in Norway has been increasingly restricted, and the presence of an anesthetist when performing anesthesia has significantly increased from 1979 to 2018 ($p<0.001$). Digitalization has impacted the vigilance to the patient during anesthesia, and led to that anesthetists work closer with the patient, while NAs are occupied with the digital tools. Professional developers' (n=60) and managers' (n=30) report that a master's degree contribute to professional development and evidence-based practice. However, departments made little effort to facilitate students taking a degree.

Conclusion: The NA scope of practice seems to be challenged. Education, more available anesthetists, and introduction of new digital technology impact the NA role. These aspects may be transferable to other APN roles.

Ann-Chatrin Linqvist Leonardsen

Digitalization within advanced practice nursing settings

Background

Digitalization in healthcare requires adaptive change in human attitudes and skills. The aim of this project was to explore emergency nurses (EN), critical care nurses (CCN), operating room nurses (ORN) and nurse anesthetist's (NA) perspectives on digitalization within their respective wards.

Methods

A qualitative design was chosen, using individual interviews with eight ENs, ten CCNs, eight ORNs and eight NAs (N=34). A reflexive, thematic analysis was used to analyze the data. Data were analyzed separately within ENs and CCNs, and together within ORNs and NAs.

Results

The results are presented in three different papers. In the EN interviews three themes were identified, namely 1) Consequences for patient safety 2) Influencing communication in the ED and 3) Impacting acute nursing. In the ORN and NA interviews two themes were identified, namely 1) Impacting the work processes, and 2) Implications for patient safety. In the CCN interviews two main themes with subthemes were identified; 1) Digital tools have come to stay, with subthemes a) Seamlessly integrated into the work processes, b) Digital competence, and c) Variable trust in the technology, and 2) Evolving relationships, with subthemes a) With focus on the screen and b) Developing one´s professional role as a critical care nurse.

Conclusion

Digitalization in specialized hospital wards impact advanced practice nurses work processes and their relationships to colleagues, patients and relatives.

Implications for clinical practice

These aspects need to be emphasized when planning for and implementing innovations within specialized hospital ward. The results may be transferrable to other hospital wards.

Anne Julsrud Haugen

Efficacy of naproxen in patients with sciatica: multicentre, randomized, double blind, placebo-controlled trial

Background:

Despite the extensive use of non-steroidal anti-inflammatory drugs in the management of sciatica, their potential benefits remain uncertain.

Methods:

A total of 123 adults with radiating leg pain below the knee (≥4 on a 0–10 numeric rating scale [NRS]) and clinical signs consistent with nerve root involvement were recruited from four Norwegian hospitals. Participants were randomized to receive either naproxen 500 mg or placebo twice daily for 10 days. The primary outcome was daily leg pain intensity, measured on a 0–10 NRS during the treatment period. This outcome was analyzed using a linear mixed-effects model.

Results:

Daily leg pain intensity revealed a statistically significant difference in favor of naproxen, with an adjusted mean difference of −0.5 (95% CI −0.8 to −0.1, $P = 0.015$). In the naproxen group, the treatment effect was significantly related to time, and over the whole 10-day period, the average adjusted difference was −0.6 (95% CI −0.8 to −0.5). Mean numbers needed to treat for 30% and 50% improvement were 9.9 (95% CI 4.7-15.0) and 20.7 (8.7-32.7), respectively. The adjusted mean difference for back pain was −0.4 (95% CI −0.8 to 0.0), and for Roland Morris Disability Questionnaire for Sciatica, it was −1.5 (95% CI −3.0 to 0.0). No differences were found for sciatica bothersomeness or consumption of rescue medication or opioids.

Conclusions and clinical implications:

Naproxen treatment showed small, likely clinically unimportant benefits compared with placebo in patients with moderate-to-severe sciatica.

Asgeir Amundsen

Avascular Necrosis of the Scaphoid- Preiser Disease : Outcomes of 39 surgical cases

Purpose: Currently there is no established treatment standard for patients with idiopathic avascular necrosis (AVN) of the scaphoid, also known as Preiser Disease. The aim of this study was to evaluate our experience with outcomes of operative interventions performed for patients diagnosed with Preiser Disease and to assess scaphoid morphology in the contralateral wrists.

Methods: We performed a retrospective review of all patients undergoing surgery for Preiser disease between 1982 and 2019 at our institution. A total of 39 wrists in 38 patients were identified. Mean age was 37 years at time of surgery, median follow up was 5.3 years. The patients were classified according to the Herbert and Kalainov classification. Pre- and post-operative pain and functional outcomes were evaluated, and Mayo Wrist Scores were calculated. Reoperations for complications were recorded.

Results: Overall, pain and Mayo Wrist Scores improved, while flexion/extension decreased slightly and grip strength remained stable. Comparison of the two main surgery groups, 17 wrists with a pedicled vascular bone graft (VBG) and 12 wrists with salvage surgery (4CF/PRC) showed similar functional outcomes. Similar outcome scores were found based on either the pre-operative Herbert or Kalainov classifications.

Conclusions: A treatment algorithm of Preiser disease is lacking and the optimal surgical treatment remains controversial. Pedicled VBG's had similar functional outcomes as salvage procedures, but preserving the scaphoid was possible in 70 percent of the pedicled VBG cases.

Clinical implications: Preiser Disease is a complicated condition to treat with several surgical solutions.

Dobrinko Socanski

Do persistence of EEG abnormalities in children with ADHD without epilepsy comorbidity predicts better adherence to methylphenidate at three years follow-up?

Background: EEG-non-epileptiform abnormalities such as slowing and/or irregularity of the background rhythm (EEG-non-epi-ab) occur often in children with ADHD. The purpose of the study was to investigate whether the persistence of EEG-ab on a control EEG in ADHD children predicts better adherence to MPH at three years follow-up.

Methods: A total of 503 ADHD children (82.4% male) without previous epilepsy aged between 5-14

years were included. Baseline assessments: the occurrence of EEG ab, EEG-epi-ab, EEG non-epi-ab,

and initial response to MPH. At least one control EEG was performed in all cases with EEG-epi-ab. At

three years follow-up, assessments included the occurrence of EEG-ab on control EEG and

adherence to MPH in children who had EEG-epi-ab on baseline EEG.

Results: The EEG-ab were identified in 51,5% of ADHD children, and EEG-epi-ab in 5.3%. No

statistically significant differences were observed between the groups with and without EEG-ab in

terms of age, gender, initial use and positive response to MPH. Notably, EEG-non-epi-ab occurred

more frequently in cases who had EEG-epi-ab on baseline EEG (81.5% vs 51.9%). At three years

follow up, of the 27 children who at baseline had EEG-epi-ab, significantly higher adherence to MPH

was found in cases who demonstrated EEG-non-epi-ab on last control EEG (85.7% vs 53.6%).

Nobody of 27 ADHD cases developed epileptic seizures

Conclusions: Children whit ADHD who had EEG-epi-ab at baseline assessment and demonstrated EEG-non-epi-ab on last control EEG had significantly higher maintenance to MPH at three years follow-up.

Eivind Hasvik

Bone mineral density in patients with transient osteoporosis of the hip, regional migratory osteoporosis, bone marrow edema syndrome, and related terms: a scoping review

Background
Transient osteoporosis of the hip (TOH), regional migratory osteoporosis (RMO), and bone marrow edema syndrome (BMES) are increasingly recognized as manifestations of the same underlying condition. In addition to pain in a lower limb joint and bone marrow edema visible on MRI, demineralization of the affected bone is considered a hallmark feature. However, the existing densitometry data is fragmented and difficult to interpret.

Methods
This study reviewed 561 publications on TOH, RMO, BMES and similar designations and identified 188 patients with quantifiable bone mineral density (BMD) data (Z-, T- (in patients <50 years), or raw scores) obtained during active disease and unaffected by treatment.

Results
Mixed-effects modelling and linear regression showed significant BMD reductions in symptomatic hips: marginal mean Z/T-scores -2.12 (95% CI -2.4 to -1.88, n = 48). In pairwise analyses, the BMD marginal mean Z/T-score difference was -1.2 (95% CI -1.7 to -0.8, n = 16) in the symptomatic compared to asymptomatic hips, and the marginal mean raw score was -0.173 g/cm^2 (95% CI: -0.214 to -0.132, n = 19) lower, a 21% difference. Despite nearly none of the patients reporting back pain, spine BMD was also significantly reduced: marginal mean Z/T-scores -1.83 (95% CI -2.1 to -1.6, n = 65). Among perinatal women specifically, spine BMD was -2.2 (95% CI: -2.6 to -1.8, n = 22).

Conclusions
No discernible difference in BMD was found between patients reported under osteoporosis-related or bone marrow edema-related terminologies, further underpinning a common underlying pathology.

Eivind Hasvik

Adverse events of 10-day full-dose naproxen treatment: A randomized, double-blind, placebo-controlled trial in sciatica patients

Background
Despite widespread use, the adverse event (AE) profile of short-term naproxen treatment is not firmly established. This study evaluated AEs in the NIS trial, a 10-day placebo-controlled investigation of naproxen 0.5 g bid in patients with sciatica.

Methods
AEs were recorded daily through self-reports using a checklist within an electronic case report form, which encompassed 10 expected events and an open text field for unsolicited events. Additionally, an investigator inquiry was conducted at the end-of-study visit.

Results
Of the 123 participants, 120 were included in the safety population (59 naproxen, 61 placebo). Adherence to the study medication and use of rescue medication (paracetamol) were similar between the naproxen and placebo groups. Self-reported AEs were observed in 23% (14/61) of placebo patients and 25% (15/59) of naproxen patients, with 89% reported through the prespecified checklist and 11% unsolicited. No serious AEs occurred, and no participants were withdrawn due to AEs. At the end-of-study visit, the investigators recorded AEs from 10 participants in each group who had answered ‘no’ every day when asked in the electronic case report form whether they had experienced side effects. Conversely, there were eight instances where participants self-reported AEs that were not captured by the investigators.

Conclusions
We conclude that collecting AEs through self-reports using checklists is an effective supplement to the traditional retrospective collection by investigators. Our findings contribute to understanding the adverse effect profile of short-term, full-dose naproxen treatment, aiding future synthesis for more precise estimates of AEs attributable to naproxen.

Eivind Hasvik

Clinical characteristics of patients with bone marrow edema syndrome, transient osteoporosis or migratory osteoporosis: a scoping review

Background
Bone marrow edema syndrome (BMES), transient osteoporosis of the hip (TOH), and regional migratory osteoporosis (RMO), along with numerous variants of these terms, are used inconsistently to describe spontaneous pain, typically in the lower extremity, accompanied by bone marrow edema on MRI and/or bone demineralization.

Methods
In the present review, we aimed to determine whether these designations represent distinct conditions or varying manifestations of a shared pathology. We employed a scoping review methodology, following a preregistered protocol, utilizing a comprehensive systematic search of electronic databases. Eligible publications reported on patients designated with BMES, TOH, RMO, or related terms. Data extraction focused on demographics, clinical features and imaging results. Descriptive statistics and meta-analytic methods were used to synthesize the data.

Results
A total of 2,924 patients, across 561 studies, were included. Our results show that patients described by terms related to bone marrow edema syndrome, or transient or migratory osteoporosis, displayed similar demographic and clinical profiles.

Conclusions
Our findings strongly suggest that these various designations refer to the same clinical entity. Bone marrow edema syndrome appears to be the most suitable term to describe this condition, facilitating a more standardized approach to future diagnosis, management and research.

Esten Konstad Øiaas Haanæs

Effects of deep deltoid ligament suture, trans-syndesmotic fixation and fibular plating in unstable ankle fracture models

Background:
Unstable ankle fractures have traditionally been treated with internal fixation of the fibular fracture and sometimes trans-syndesmotic fixation (TrSF). Fractures at the level of the ankle joint are termed Weber B fractures. When the deltoid ligament is fully torn, the fracture is unstable and requires surgical treatment. Lauge Hansen call these fractures Supination-External Rotation injuries stage 4b (SER4b).

Cadaveric and some clinical studies show a significant effect from deep deltoid ligament repair (DLR) on joint stability and congruency of the distal tibiofibular joint. This requires a medial incision in addition to the lateral used for plating of the lateral malleolus. We know that TrSF has a synergistic effect to DLR, but not to which extent.

Methods:
We will investigate the stabilizing effects of TrSF by a tricortical screw compared to DLR or both in SER4b fracture models.

Fifteen cadaver ankle specimens will be tested using an industrial robot measuring ankle stability in lateral translation (talar shift), valgus (talar tilt), and internal and external rotation in a neutral talocrural joint position (90 degrees ankle position). Mortise radiographs will be taken to measure talar shift and talar tilt and change in tibiofibular gap at the level of the syndesmosis on external rotation (Frick) test.

Results:
We want to discover differences in ankle joint stability after TrSF and/or DLR in our cadaveric fracture model.

Conclusion:
Our study will show the effects of TrSF and DLR repair on Weber B/SER4b injury models. This may guide choice of treatment for this kind of fracture.

Esten Konstad Øiaas Haanæs

The benefit of repairing the deltoid ligament in unstable ankle fractures: Patient-reported functional outcome and radiological stability measurements.

Background:
Suturing the deep posterior deltoid ligament in unstable ankle fractures is novel to established treatment. Research by colleagues in Østfold Hospital Trust has shown good results from non-operative treatment of ankle fractures if the deltoid ligament is partly intact. Cadaveric studies show that deltoid ligament repair in addition to plating of the lateral fracture improves stability restoration. May this contribute to better functional results for our patients?

Methods:
A total of 120 patients with Lauge Hansen SER 4B ankle fractures will be randomized to plating of the lateral malleolus only or additional suture of the deep deltoid ligament. Main end point will be function measured in Olerud-Molander Ankle Score (OMAS) at 1 and 2 years. Secondary end points are other ankle specific patient-reported scores (PROMS), VAS pain and Euroquol EQ 5D-5L. Differences on group level in gravity stress and weightbearing ankle x-ray (WBXR) measurements, treatment-related adverse events and incidence of posttraumatic arthritis will be reported. Inclusion started in September 2024. Several Norwegian hospitals form a catchment area of 2 million inhabitants altogether. We aim to finish inclusion within 2027.

Results:
So far 21 patients have been randomised. There is no loss to follow up and no major adverse events have been registered yet.

Conclusion:
Deltoid ligament patency is shown to be fundamental to ankle joint stability in a fracture setting. The trial presented is the first major RCT on deep deltoid ligament repair. It may tell us whether additional deltoid ligament repair restores function better than the established treatment.

Gabriela Hjell

Socioeconomic position and premature mortality in severe mental disorders: a population-based cohort study across primary and specialist healthcare

Background: Individuals with severe mental disorders are at increased risk of premature mortality, with low socioeconomic position (SEP) strongly linked to these disorders and mortality. Still, we lack understanding of how SEP affects cause-specific mortality in mental disorders treated across different healthcare settings.

Methods: We assessed the impact of SEP on mortality metrics in depression, bipolar disorder, and schizophrenia treated across specialist and primary healthcare. A cohort of all individuals living in Norway aged between 18 and 79 years on Jan 1, 2008, was followed until Dec 31, 2023. Information on mental disorders, cause of death, and educational attainment as indicator of SEP was retrieved from nationwide registries. Life expectancy reductions stratified by SEP and cox-regressions of cause-specific mortality controlling for SEP were applied.

Results: The cohort consisted of 3,193,359 individuals, including 29,371 with schizophrenia, 57,772 with bipolar disorder, and 673,994 with depression. Individuals with mental disorders showed shortened life expectancies with opposite SEP patterns between schizophrenia (university degree: by 10.5 years, high school:10.9, lower than high school:11.4) and depression (university degree:5.2, high school:4.6, lower than high school:4.1), a pattern replicated across all healthcare settings, with highest gap for inpatient (schizophrenia:11.4), and lowest for primary care (schizophrenia:7.9). Low SEP increased the mortality risk across population, further aggravating the mortality gap.

Conclusions/clinical implications: The current pattern of mortality metrics demonstrates that individuals with severe mental disorders from all socioeconomic backgrounds face an unmet need for better mortality prediction and tailored prevention, with a potential benefit of incorporating SEP in healthcare strategies.

Ingvild Aurebekk

Interrater Reliability of the SCID-5-AMPD-I Junior and ICD-11 Severity Ratings in a Norwegian Adolescent Sample

Background:
Reliable and developmentally appropriate assessment tools are essential for identifying personality dysfunction in adolescents. This study evaluates the interrater reliability of the SCID-5-AMPD-I Junior and ICD-11 severity ratings in a clinical sample.

Methods:
Thirty-six adolescents aged 14–18 were recruited from local Child and Adolescent Mental Health Services. Each participant was assessed in two separate SCID-5-AMPD-I Junior interviews by different clinicians. After each interview, the ICD-11 Box 6.2 severity checklist was completed. Interrater reliability was calculated using intraclass correlation coefficients (ICCs) for all domains and subdomains.

Results:
The SCID-5-AMPD-I Junior demonstrated excellent interrater reliability for the total LPFS (ICC = .91) and high agreement across domains: Identity (.87), Self-direction (.84), Empathy (.85), and Intimacy (.88). Subdomain scores were generally strong, though some variability was observed (e.g., Goals ICC = .59; Perspective-taking ICC = .67). The ICD-11 Box 6.2 showed strong reliability for overall severity (ICC = .85), supporting its use in conjunction with AMPD-based assessment.

Conclusions:
Both the SCID-5-AMPD-I Junior and ICD-11 Box 6.2 are reliable tools for assessing adolescent personality dysfunction, offering cross-system compatibility and sensitivity to developmental nuances.

Clinical implications (if relevant):
This study supports the integration of dimensional, developmentally sensitive assessments in clinical practice. Ongoing training and refined case examples may further enhance scoring consistency across raters.

Ioana Bancu Dumitrescu

Characterizing IgAN and assessing the role of International IgAN Prediction Tool in our population.

Background and Aims:

IgA nephropathy (IgAN) is the most common primary glomerulonephritis worldwide. Patients with IgAN display heterogeneity in epidemiology, clinical manifestations, renal progression, and long-term outcomes. Given these facts, treatment options are highly variable, and it is believed that, rather than being a single entity, IgAN may include different entities that lead to mesangial IgA deposition.

There are clinical and histological factors associated with worse prognosis but, due to its variable presentation, it is very difficult to estimate the specific prognosis for each patient. In KDIGO guidelines for glomerular diseases, the International IgAN Prediction Tool (I-IgAN-PT) has been proposed to determine the risk of 50% decline in glomerular filtration rate (GFR) or end-stage kidney disease.

Our aim was to characterize IgAN and to associate the risk estimated by I-IgAN-PT with the decline of GFR in our population.

Methods:

A retrospective observational study was performed including patients diagnosed with IgAN by kidney biopsy. Clinical, analytical, and histological parameters were collected at the time of kidney biopsy. I-IgAN-PT and GFR were calculated at 12, 24, and 60 months after kidney biopsy. The statistical software utilized was Jamovi v2.3.

Results:

This study included 89 patients diagnosed with IgAN by kidney biopsy, mostly men (66.3%). The median age was 47.8 years old (IR: 30.8-58.3), and mean body mass index (BMI) was 27.5±5.4kg/m^2. Regarding the onset of IgAN: 41.6% presented high blood pressure, 41.6% presented history of chronic kidney disease (CKD), 30.3% presented acute kidney injury (AKI), 35% referred history of macrohematuria, 4.5% debuted as nephrotic syndrome, and 13.5% debuted as nephritic syndrome. Secondary causes of IgAN were found in 14.6% of patients. The main analytic parameters at baseline were: hemoglobin 13.1±2.34mg/dl, albumin 4.09±0.477g/dl, GFR 69ml/min/1.73m^2 (IR: 36.5-90), and proteinuria 0.685g/24h (IR: 0.22-1.2). A 22.4% showed crescents in kidney biopsy. Median of risk estimated I-IgAN-PT was: 0.44% (IR: 0.2-1.13) at 12 months, 1.56% (IR: 0.727-3.87) at 24 months, and 5.8% (IR: 2.79-3.87) at 60 months. The median decline of GFR was: 3.8% (IR: -10.9-13.7) at 12 months, 3.75% (IR: -6.2- 19.5) at 24 months, and 11.9% (IR: 2.1-34.2) at 60 months.

Baseline GFR was inversely correlated with BMI, systolic blood pressure at the onset, and proteinuria. GFR was positively correlated with hemoglobin, and albumin. A positive correlation between proteinuria and age was found, and a negative correlation between proteinuria, hemoglobin, and albumin was observed. Albumin was negative correlated with BMI, and positive correlated with hemoglobin. These correlations were statistically significant ($p<0.05$).

A significant association was observed between the risk estimated by I-IgAN-PT and the presence at the onset of high blood pressure, nephrotic syndrome, AKI, and nephritic syndrome. Other parameters, such as crescents, secondary IgAN, and CKD, were not associated with that risk. Regarding these mentioned parameters, only AKI and baseline GFR were statistically significant associated with decline in GFR at 12, 24, and 60 months.

When the decline in GFR was analyzed at 12, 24 and 60 months, no significant correlations were found with the risk estimated by I-IgAN-PT at 12, 24 and 60 months.

Conclusions:

IgAN is an extremely variable disease and it is difficult to predict single patient outcomes. This study showed the heterogenicity of this disease in our population. I-IgAN-PT did not demonstrate a significant correlation with GFR decline over time. However, some factors at diagnosis were associated with changes in these parameters. Although the tool's ability to predict GFR decline was limited, these findings demand new prognostic tools, and individualized management strategies in IgAN. Further prospective and larger studies may redefine predictive models and enhance risk stratification in this heterogeneous population.

Julia Trevor

Forekomst av analinkontinens og oppfølging etter fødsel blant kvinner med sfinkterruptur– foreløpige resultater fra en retrospektiv studie

Bakgrunn

Kvinner med obstetrisk anal sfinkterruptur (OASI) har en høyere risiko for analinkontinens etter fødsel. Studiens hovedmål er å beskrive forekomst av analinkontinens det første året etter fødsel hos kvinner med OASI, sekundært dokumentere hvor mange som får tilbud om oppfølging med konservativ behandling, inkludert bekkenbunnstrening hos fysioterapeut.

Metode

Denne pågående retrospektive kvalitetssikringsstudien tar utgangspunkt i data fra medisinske journaler til kvinner med OASI i perioden 2006 og 2021 ved Sykehuset Østfold HF.

Deskriptiv analyse av skadeomfang, forekomst av analinkontinens registrert med St.Marks inkontinens score ved oppfølging anorektal poliklinikk, samt tilbud om konservativ behandling.

Resultat

I perioden fra 2006-2021 var det registrert 516 (1.4%) kvinner med OASI av totalt 36899 vaginale fødsler ved Sykehuset Østfold HF. Fire av fem hadde skade kun på den ytre sfinkter, mens én av fem i tillegg hadde skade på den indre sfinkter.

59% ble fulgt opp ved anorektal poliklinikk det første året etter fødsel. Om lag halvparten av kvinnene rapporterte én eller flere episoder med analinkontinens de siste fire ukene, gjennomsnittlig St. Marks inkontinens score 5.3 (SD 4.3).

Tre av fem kvinner som møtte til poliklinisk undersøkelse fikk tilbud om konservativ behandling, inkludert spesifikk bekkenbunstrening hos fysioterapeut (n=175).

Konklusjon

Første året etter fødsel rapporterte halvparten av kvinnene med OASI som møtte til kontroll om én eller flere episoder med analinkontinens siste måneden. Så mange som tre av fem kvinner hadde behov for videre oppfølging. Dette synliggjør viktigheten av kartlegging av analinkontinens hos kvinner med OASI og behovet for et godt behandlingstilbud for disse kvinnene.

Kristina I. Aass Holten

Fatigue trajectory and the impact of disease course through the first year after diagnosis in patients with inflammatory bowel disease (the IBSEN III study)

Background:

Fatigue is common in both Crohn's disease (CD) and ulcerative colitis (UC), but the pathogenesis is still unclear. We aimed to assess changes in fatigue prevalence from diagnosis to the 1-year follow-up and evaluate the role of disease course for the presence of substantial fatigue (SF) one year after diagnosis.

Methods:

Adults with CD/UC were recruited from the IBSEN III cohort. Fatigue was assessed at diagnosis and the 1-year follow-up using the Fatigue Questionnaire (FQ). Associations between SF at the 1-year follow-up and disease-related factors were evaluated using a multivariate logistic regression model adjusted for gender, age and comorbidities.

Results:

In total, 596/1370 patients were included (CD: 196, UC: 400). Within the 1-year follow-up, about 20% experienced resolution of SF, while 10% gained SF. For CD, development of non-passable stricture and/or surgically treated stricture within first year of disease (OR=4.52, 95%CI [1.61;12.68]), subjective flares since diagnosis (OR=2.55, 95%CI [1.26;5.16]), female gender (OR=3.12, 95%CI [1.53;6.37]) and comorbidities (OR=4.05, 95%CI [1.89;8.69]) were independently associated with SF at the 1-year follow-up. For UC, current biological treatment (OR=5.14, 95%CI [1.56;16.96]), Mayo endoscopic score (0-3) at the 1-year follow-up (OR=1.54, 95%CI [1.01;2.35]), subjective flares since diagnosis (OR=2.66, 95%CI [1.24;5.72]) and female gender (OR=2.20, 95%CI [1.06;4.57]) were independently associated with SF at the 1-year follow-up.

Conclusions:

Fatigue may be expected to persevere after one year of disease if present at the time of diagnosis. Clinical factors reflecting a more severe disease course were associated with SF one year after diagnosis for both CD and UC.

Line Norman Kvenshagen

Association between Labour Analgesia and Neonatal Heart Rate immediately after birth

Background: Regional analgesia is widely used for labour pain relief. The impact on foetal heart rates has been extensively studied, but little is known about its impact on neonatal heart rates. The aim of this study was to assess whether maternal use of epidural, spinal or pudendal labour analgesia was associated with differences in neonatal heart rates.

Method: This Norwegian observational study included 1,281 singleton cephalic term vaginal deliveries from 1 September 2019 to 30 June 2021. Neonatal heart rates were measured using dry-electrode technology. Generalised linear models adjusted for covariates related to the mother, neonate and labour process were used to estimate neonatal heart rates by methods of maternal analgesia at 30 seconds, one, two and three minutes after birth. The results were compared to a baseline representing heart rates modelled for infants whose mothers received no analgesia.

Results: The median heart rate in all groups, including the epidural (n = 439), spinal (n = 34), pudendal (n = 36), and no analgesia (n = 772) groups, ranged from 147 to 175 beats per minute (bpm) at all time points. Infants of mothers who received epidural analgesia had slightly higher mean heart rate compared to the baseline at two (167 vs. 164 bpm) and three (152 vs. 149 bpm) minutes of age ($p<0.05$). No significant association was observed between spinal or pudendal analgesia and neonatal heart rates.

Conclusion: Infants whose mothers received epidural labour analgesia had statistically, but not clinically significant higher heart rates the first minutes of life.

Linn Heitmann

Optimizing Acute Ischemic Stroke diagnostics using Artificial Intelligence – a prospective observational multicenter pilot study

Background and Aims

Timely diagnosis and reperfusion therapy are essential in acute ischemic stroke. Geographic and organizational variability poses challenges to equitable stroke care. The aim of the present study was to evaluate if use of AI-based software for large vessel occlusion (LVO) detection reduced key time intervals.

Methods

We conducted a prospective observational multi-center pilot study, including 200 patients undergoing endovascular thrombectomy. The use of multiphase CT angiography with software for automatic LVO detection, calculation of infarct volume and penumbra was compared with standard radiological diagnostics. The cohort consisted of three groups: (1) pre-AI implementation (n=90, 12-month period), (2) post-AI without actual AI use (n=80), and (3) post-AI with active AI use (n=30), both over a 17-month period. The primary outcomes were time from local CT to contact with thrombectomy center and time from local CT to groin puncture. Secondary outcomes included good functional outcome (mRS 0–2) at 3 months.

Results

The median age across the samples was 74 years (IQR 65–81), and 46% were female. Median time from local CT to groin puncture was shortest in the group with AI (152 min) compared to group 1 (179 min, p=0.045) and group 2 (181.5 min, p=0.007), and with no significant difference between group 1 and 2. There were no significant differences between the groups regarding time from CT to contact with thrombectomy center or mRS.

Conclusions

AI-assisted LVO detection was associated with shorter treatment times. Further development and implementation of AI tools may reduce regional disparities and streamline stroke care.

Marie Sørenstua

Evaluation of Erector spinae plane block for postoperative analgesia in laparoscopic ventral hernia repair: A Randomized Placebo Controlled Trial

Background:
The Erector spinae plane block (ESPB) reduces postoperative pain after several types of abdominal laparoscopic surgeries. There is sparse data on the effect of ESPB in laparoscopic ventral hernia repair. The purpose of this study was to test the postoperative analgesic efficacy of an ESPB for this procedure.

Methods:
In this prospective, double-blind, randomized controlled study, adult patients undergoing laparoscopic ventral hernia repair were randomly assigned to either bilateral preoperative ESPB with catheters at the level of Th7 (2 x30 ml of either 2.5 mg/ml ropivacaine or saline), with postoperative catheter top ups every 6 h for 24 h. The primary outcome was rescue opioid consumption during the first hour postoperatively. Secondary outcomes were total opioid consumption at 4h and 24 h, pain scores, nausea, sedation, as well as Quality of Recovery 15 (QoR-15) and the EuroQol-5 Dimensions (EQ-5D-5L) during the first week.

Results:
In total, 64 patients were included for the primary outcome measure. There was no significant difference in rescue opioid consumption (oral morphine equivalents (OME)) at one hour postoperatively, with the ESPB group 26.9 ±17.1 mg versus 32.4±24.3 mg (mean±SD) in the placebo group (p= 0.27). There were no significant differences concerning the secondary outcomes during the seven-day observation period. Seven patients received a rescue block postoperatively, providing analgesia in five patients.

Conclusions:
We found no difference in measured outcomes between ESPB and placebo in laparoscopic ventral hernia repair. Future studies may evaluate whether a block performed using higher concentration and/or at a different thoracic level provides more analgesic efficacy.

Martin G. Gregersen

Deep posterior tibiotalar ligament in Weber B ankle fractures: An observational study correlating arthroscopic and stress radiographic findings

Background

Weber B fractures often show unstable gravity stress tests but stable weightbearing radiographs (classified SER4a), suggesting partial deltoid ligament injury with an intact deep posterior tibiotalar ligament (dPTTL). Conversely, a dPTTL rupture is assumed if both radiographs are unstable (classified SER4b). However, the state of the dPTTL in SER4a vs. SER4b has not been well studied. This study assessed the prevalence of dPTTL injury using direct visualization during arthroscopy of SER4a and SER4b fractures.

Methods

We conducted a prospective study on 20 patients with Weber B/SER4a-b ankle fractures having unstable gravity stress tests or unstable weightbearing radiographs (medial clear space ^{3} 4.0 millimeters). Blinded assessors evaluated the dPTTL using minimally invasive arthroscopy under local anesthesia. Intact dPTTL was defined by normal ligament visualization with tensioning and medial joint space closing with dorsiflexion.

Results

Based on radiographic criteria, 15 patients were classified as SER4a and five as SER4b. Arthroscopy showed an intact dPTTL in 14 SER4a injuries. One patient with a 3.9 mm medial clear space had a torn dPTTL. All SER4b injuries revealed dPTTL disruptions with arthroscopic assessment.

Conclusions

In Weber B fractures evaluated arthroscopically, the dPTTL is typically intact in cases where weightbearing radiographs are stable despite unstable gravity stress tests. Conversely, complete dPTTL disruption was consistently observed in cases where both tests were unstable. These findings support the hypothesis that a stable weightbearing radiograph indicates an intact dPTTL.

Martin Tesli

Socioeconomic position and somatic comorbidity in mental disorders

Background:

Individuals with mental disorders face an elevated risk for somatic noncommunicable diseases (NCD), like cardiovascular disease (CVDs), chronic obstructive pulmonary disease (COPD), diabetes and cancer. Low socioeconomic position (SEP) is linked to both mental disorders and somatic NCDs, but its role in this association remains unclear. Here, we provide a comprehensive overview of how associations between mental disorders and somatic NCDs vary by SEP.

Methods:

Data on all adult individuals in Norway from 01.01.2008 to 01.01.2010 (N=3,589,719) were linked to nationwide registries on primary and secondary health care, dispensed drugs, causes of death and socioeconomic variables. Exposure variables were psychotic, bipolar, depressive and anxiety disorders and outcome was CVD, COPD, diabetes or cancer diagnosed during follow-up (01.01.2010-31.12.2020). Cox regression models estimated hazard ratios for somatic NCDs among individuals with mental disorders compared to the general population, adjusting for and stratifying by SEP, sex and age.

Outcomes:

All mental disorders were associated with an increased risk of somatic NCDs, strongest for COPD and weakest for cancer. Risk increased with disorder severity, with psychotic and bipolar disorders showing the strongest associations. Young adults with psychosis had a 4-5-fold increased risk of diabetes and COPD. Low SEP was associated with both mental disorders and somatic NCDs and contributed moderately to their co-occurrence.

Interpretation:

We found an increased risk of somatic NCDs in individuals with mental disorders and identified young adults with psychosis as a particularly vulnerable subgroup. Low SEP compounds this burden, underscoring the need for integrated mental and somatic healthcare.

Mikaela Hamre

Association of Radiological and Clinical Outcomes after Chevron Osteotomy Treatment of Hallux Valgus: Average 6.5-Year Follow-Up Study in Women

Background
Hallux valgus, the most common forefoot deformity, frequently leads to corrective foot surgery. Despite high surgical rates, patient dissatisfaction remains prevalent, and its causes are unclear. Surgeons often focus on radiological corrections, assuming greater corrections yield higher satisfaction. This study aimed to investigate whether traditional radiological measurements, rotational parameters associated with first metatarsal pronation (e.g. lateral head shape and tibial sesamoid position), and routinely collected demographic variables (e.g., age, BMI, occupational status) can predict patient-reported outcomes following Chevron osteotomy.

Methods In this retrospective analysis, we included 89 female patients who underwent Chevron osteotomy from 2016 to 2018. Patients were evaluated on average 6.5 years postoperatively (range 5 to 8 years). Demographic variables, including age at surgery, body mass index (BMI), occupational status, and activity level, along with radiographic variables, such as the hallux valgus angle (HVA), intermetatarsal angle (IMA), lateral head shape, and tibial sesamoid position, were collected pre- and postoperatively. The primary outcome was the MOxFQ pain subscore; secondary outcomes included VAS pain scores and Likert scale satisfaction.

Results
A statistically significant association was observed between greater correction of the hallux valgus angle (HVA) and improved MOxFQ pain subscores ($p = 0.014$). Higher preoperative HVA values were associated with lower postoperative pain scores, indicating improved outcomes ($p = 0.043$), whereas higher postoperative HVA values were associated with increased pain, suggesting worse outcomes ($p = 0.022$). Despite these findings, the overall association of both preoperative and postoperative radiological measurements, as well as demographic factors, for patient-reported outcomes was limited, with a pseudo R-squared value of just 0.0267. VAS pain scores showed no significant associations (all $p > 0.05$). Although the Likert satisfaction scale correlated with preoperative HVA ($p = 0.049$) and postoperative HVA ($p = 0.026$), the predictive strength of these variables remained modest.

Conclusions In this minimum five year retrospective study of 89 female patients who underwent Chevron osteotomy and had not undergone a later secondary procedure we found that HVA radiographic correction with a chevron osteotomy was weakly associated with improved pain and satisfaction.

Level of Evidence
Level IV, retrospective case series.

Sigve Aadalen

Early Life Dynamics of Torque-teno Virus Infection: Insights from the PreventADALL Mother-Child Cohort Study

Background:

Torque-teno virus (TTV), a small, circular DNA virus that makes up a substantial part of the human virome, is found in over 90% of adults worldwide. Previous studies have reported high prevalence of TTV infection also in children; however, findings are inconsistent due to small sample sizes and non-standardized methodologies. This study aims to determine the prevalence, timing of infection, and viral loads of TTV in infants using data from a large population-based cohort.

Methods:

From the general population-based PreventADALL birth cohort study (N=2397), all infants with available blood samples at birth using umbilical cord blood, and at 3, and/or 12 months were recruited (N=842). The quantification of TTV DNA was performed using a standardized commercial quantitative real-time PCR kit.

Results:

At birth TTV DNA was detected in 4,1% of the cord blood samples, while TTV was identified in 61,3% of the infants at 3 months of age, and in 98.2% at 12 months of age. The viral load (log10 copies/mL) in the TTV-positive samples increased in the first year of the infant's life, from a mean of 2.0 (range 1,2- 4.4) at birth to 3,6 (range 1.2-6.3) at 3 months and 4.6 (range 1.2-8.8) at 12 months of age.

Conclusions:

Among unselected population-based children, 98% were infected by TTV by 1 year of age. Our findings indicate that although intrauterine infection is possible, it seems to be rare.

Maria Cecilie Stivang og Therese Buerengen

The Norwegian WHO Labour Care Guide Trial: a stepped wedge multicentre cluster randomised trial for safety and wellbeing in labour

Background: All labour care units in Norway use the WHO partograph for monitoring and assensing labour progress, based on research from the 50ties and 70ties. Through a revision of WHO recommendations for Intrapartum Care, a new labour progression-monitoring tool, the Labour Care Guide (LCG), was presented in 2020. The LCG was designed to ensure evidence-based care with high quality and is intended to be used in all settings globally. The usability and feasibility of the LCG have been tested in South America, Asia and Africa, but LCG has not been evaluated in Europe or in high-income settings.

Methods: NORWELCG, a multicenter research project, led by Østfold Hospital Trust, brings together a multi-disciplinary research team, representing 10 delivery units in all health regions in Norway. This ongoing trial utilizes a stepped wedge cluster randomised design, comparing the WHO partograph and LCG stepwise in each unit, including approximately 23 650 women. The aim is to investigate the effect implementing LCG has on caesarean section, women`s birth experience, health care workers experiences, other labour interventions and maternal and neonatal outcomes. This will address the WHO research question: “What is the effect of the LCG on processes of care, health, well-being, and outcomes during labour and childbirth?”

Clinical implications: The results may affect nationwide labour monitoring practices and provide essential knowledge on the use of LCG in hospitals in Norway and similar health care services. Ultimately, results from this project may benefit labouring women and their babies through improved routines for treatment and care.

Tor-Morten Kvam

MDMA-assisted therapy for major depressive disorder: a seven-month follow-up

Background

Major Depressive Disorder (MDD) is a debilitating condition with a high risk of relapse. MDMA-assisted therapy (MDMA-AT) is a promising treatment for MDD, and in post-traumatic stress disorder the effects are present for one year. However, the long-term effects of MDMA-AT for MDD are not known.

Methods

This study was a seven-month follow-up after a proof of principle study with MDMA-AT for MDD, in which 12 participants with moderate to severe MDD with 3-24 months duration received two open-label MDMA dosing sessions in addition to a total of nine 90-min non-drug psychotherapy sessions (EudraCT number: 2021-000805-26). The follow-up visit took place seven months after baseline (mean 217.8 days, SD 29.9), and four months after the post-treatment visit (mean 126.8 days, SD 24.4). Outcome measures included the Montgomery-Asberg Depression Rating Scale (MADRS) and the Sheehan Disability Scale (SDS). Statistical analyses included descriptive statistics and a mixed effect model for the repeated measures.

Results

All 12 participants attended the follow-up visit. Mean MADRS scores improved significantly from baseline to follow-up (−18.4, SD 11.8; $p<0.001$), with no significant change from post-treatment to follow-up (1.5, SD 6.5). At follow-up, eight of nine initial responders/remitters maintained their status, while one relapsed. SDS scores also showed significant improvement from baseline to follow-up (−12.6, SD 7.8; $p<0.001$), with no notable change post-treatment (−0.9, SD 5.7).

Conclusions

This study provides preliminary data suggesting sustained effects on depression severity and functional disability. However, confirmation in larger samples is required.