



31. ÅRSMØDE I KLINISK ERNÆRING

Comwell Copenhagen Portside

Fredag d. 12. maj 2023



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Velkommen til det 31. Årsmøde i Klinisk Ernæring

DSKE præsenterer med stolthed to af de største internationale forskere indenfor klinisk ernæring til årsmødet i 2023.

Den ene er professor Luc van Loon, der blandt andet vil fortælle om betydningen af proteinkvalitet for muskelopbygningen. Den anden er professor Philipp Schuetz, der bl.a. vil fortælle om betydningen af inflammation for den gavnlige effekt af ernæringsbehandling.

Et andet emne, som DSKE også er stolte af at sætte på programmet, er implementering, som seniorforsker Jeanette Wassar Krik vil gøre os klogere på.

Vi har i år modtaget 28 abstracts til årsmødet. Det er rekord og har gjort det meget svært for os at vælge de 14, der var plads til på de to parallelle sessioner. Alle abstracts kan dog findes i denne årsmødebog.

Vi vil gerne sige tusind tak til de mange udstillere, der har gjort dagen mulig, så besøg endelige de mange stande i de forskellige pauser.

Endnu engang velkommen til DSKE årsmøde 2023.

Arrangører

Jørgen Wiis, næstformand i DSKE, overlæge, Intensiv Terapi Klinik, Rigshospitalet.

Marianne Boll Kristensen, bestyrelsesmedlem i DSKE, ph.d., cand.scient., klinisk diætist, Afdeling for Ernæring, Regionshospitalet Gødstrup.

Camilla Balle Bech, bestyrelsesmedlem i DSKE, klinisk diætist, Herlev og Gentofte Hospital.

Anne Wilkens Knudsen, ph.d., cand.scient. klinisk ernæring, klinisk diætist, Herlev og Gentofte Hospital.

Anne Marie Beck, seniorforsker, ph.d., klinisk diætist., Herlev og Gentofte Hospital.

Maria Edwards, cand.scient. klinisk ernæring, Clinical Research Associate, Novo Nordisk Danmark.

Aino Leegaard Andersen, Post Doc, Klinisk Forskningsafdeling, Hvidovre Hospital.

Program

- 8.30–9.30 Ankomst, registrering og morgenmad
- 9.30–9.45 **Velkomst, introduktion til dagen og The International Declaration on the Human Right to Nutritional Care**
Jørgen Wiis, næstformand i DSKE, Christian L. Hvas, formand i DSKE og Henrik Højgaard Rasmussen, DSKEs repræsentant i ESPEN-council
- 9.45–10.30 **Anabolic properties of alternative protein sources**
Luc van Loon, Professor, Maastricht University Medical Centre, Holland
- 10.30–11.15 **Nutrition for the malnourished patient: What's the role of inflammation?**
Philipp Schuetz, Professor, Kantonsspital Aarau AG, Schweiz
- 11.15–11.35 Kaffepause
- 11.35–11.50 **DSKE kliniske retningslinjer**
Lars Vinter-Jensen, Overlæge, Aalborg Universitetshospital
- 11.50–12.15 **Jens Kondrup Prisen 2023**
- 12.15–12.30 **Overensstemmelse mellem målt og estimeret energibehov hos patienter indlagt på medicinsk afdeling**
Modtager af Nutricias forskningslegat 2022: Anne Wilkens Knudsen, Sofie N. Engelsted og Cecilie Meldgaard, Københavns Universitetshospital – Herlev og Gentofte
- 12.30–12.40 **Uddeling af Nutricias forskningslegat 2023**
- 12.40–13.30 Frokost
- 13.30–14.45 **Frie foredrag i to sessioner**
- 14.45–15.00 Pause
- 15.00–15.05 **Kåring af bedste abstract som både er sendt til DSKE og ESPEN 2023**
- 15.05–15.50 **Introduktion til implementering – ernæringscreening som eksempel**
Jeanette Wassar Kirk, Seniorforsker, Københavns Universitetshospital – Hvidovre
- 15.50–16.00 Tak for i dag
- 16.15–17.15 Generalforsamling i Dansk Selskab for Klinisk Ernæring
Kun for medlemmer af DSKE.

Hovedforedragsholdere

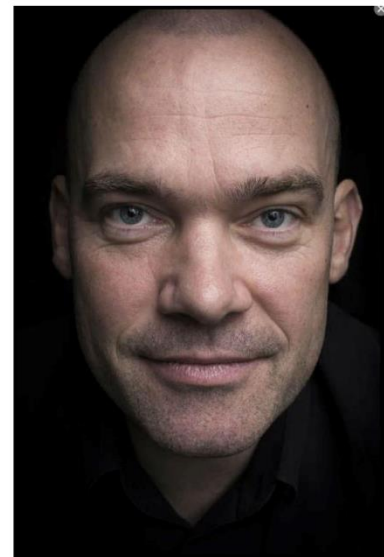
Philipp Schuetz

Prof. Philipp Schuetz was born in Switzerland and studied Medicine at the University of Basel, Switzerland, and the University Kremlin Bicetre in Paris, France. He is a board-certified internist endocrinologist and specialist for clinical nutrition. He is head of internal medicine and emergency medicine at the Kantonsspital Aarau and Professor of Medicine and Endocrinology/Nutrition at the University in Basel in Switzerland. He is also president of the Federal Commission for Nutrition in Switzerland. He has published > 300 studies and research articles in high-impact journals including the Lancet, JAMA, Annals of internal medicine among others. Prof. Schuetz obtained a research professorship of the Swiss National Science Foundation (SNF) and is principal investigator of the EFFORT I and II trials, the largest-yet randomized-controlled trial looking at clinical effects of clinical nutrition in medical patients on the ward and after discharge.



Luc van Loon

Luc van Loon is a Professor of Physiology of Exercise and Nutrition at the Department of Human Biology at Maastricht University Medical Centre. Prof. van Loon has an international research standing in the area of skeletal muscle metabolism. Current research focuses on the skeletal muscle adaptive response to exercise, and the impact of nutrition and exercise interventions to modulate muscle metabolism in health and disease. The main research interests of his laboratory include exercise metabolism, sports nutrition, adaptation to endurance and resistance type exercise, and the use of physical activity and/or dietary interventions to improve health in chronic metabolic disease and with ageing. The latter are investigated on a whole-body, tissue, and cellular level, with skeletal muscle as the main tissue of interest.



Jeanette Wassar Kirk

Jeanette Wassar Kirk er seniorforsker på Hvidovre Universitetshospital og lektor på Statens Institut for Folkesundhed, Syddansk Universitet.

Mange klinikere og forskere oplever at få en god idé eller for eksempel have udviklet en ernæringsintervention gennem et klinisk interventionsstudie med en positiv effekt.

Interventionen skal nu implementeres i daglig praksis. Det er her problemerne opstår. Mange står over for forskellige barrierer, for eksempel i form af modstand mod interventionen, mangel på ressourcer, mangel på ledelsesstøtte eller fysisk rum eller rum, der ikke matcher. Det er klassiske implementeringsudfordringer, der kan få den konsekvens, at interventionen ikke implementeres i daglig praksis.

Min videnskabelige interesse er inden for implementeringsforskning. Jeg arbejder for at udvikle metoder, som kan sikre at evidensbaseret viden og kliniske innovationer kan overføres til daglig klinisk praksis. Dette inkluderer systematisk screening for barrierer mod og facilitatorer for implementering af en intervention på multiple niveauer af sammenhænge og organisationer. Hermed kan implementeringsstrategier systematisk, der skal overkomme identificerede barriere og øge facilitatorer, udvælges, og derved øge optaget af evidensbaseret viden og interventioner i det kliniske arbejde. Jeg arbejder med kvalitative metoder, som etnografiske feltstudier og kulturanalyser. Disse former basis for at forstå den lokale kultur og kontekst.



Årets udstillere



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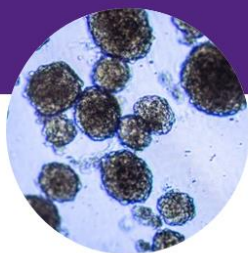
Kilder: 1. Lombard K, et al. The effects of a high energy dense, small volume oral nutritional supplement on compliance in daily clinical practice of a geriatric ward. J Nutr Aging. 2014;18(7): 649-53. 2. Jobse et al. Compliance of nursing home residents with a nutrient and energy-dense oral nutritional supplement determines effects on nutritional status. J Nutr Health Aging. 2015;19(3):356-64.

OM VERTEX

Vi investerer i videnskabelig innovation med fokus på højt specialiserede sygdomsområder. Vores mål er at udvikle transformative lægemidler til mennesker med alvorlige sygdomme.



Vores drivkraft er at hjælpe patienter med alvorlige lidelser.



Vi bekæmper den bagvedliggende årsag til sygdom, så vi kan ændre menneskers liv.



Vi er ikke bange for at tage svære medicinske udfordringer op.

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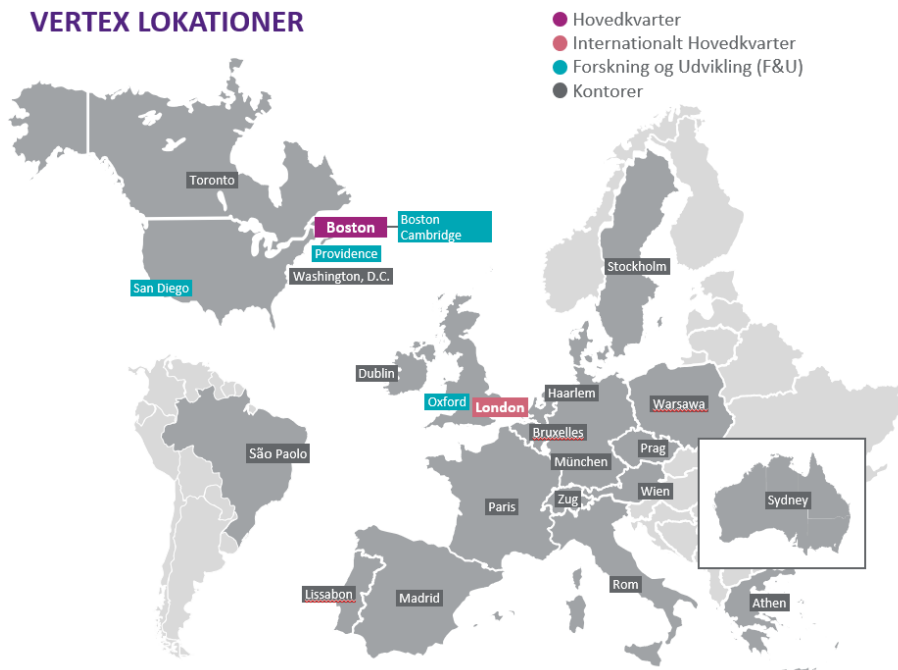
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(pr. jan. 2022) 2021

VERTEX LOKATIONER



Frie foredrag – Sal A

Moderator: Maria Edwards

- A1 13.30 Overnutrition among older nursing home residents: May some benefit from a nutritional intervention? - A cross-sectional study
Tenna Christoffersen
- A2 13.40 Unintended weight loss among COPD outpatients can contribute to worse one-year clinical outcomes
Sabina Lund Mikkelsen
- A3 13.50 Effectiveness of a multidisciplinary transitional nutritional intervention on quality of life among acutely admitted older medical patients with malnutrition or risk of malnutrition: A randomized controlled trial
Aino Leegaard Andersen
- A4 14.00 Individualised nutritional treatment increases the positive effects of a novel a la carte hospital food service concept: Results of a quasi-experimental study
Marianne Boll Kristensen
- A5 14.10 *"Når jeg er syg, vil jeg helst bare være alene"* - patienters perspektiver på sociale måltider under indlæggelse på enestue
Ingeborg Krarup Rask
- A6 14.20 Early Growth in Danish Children with Cystic Fibrosis
Karlen Bader-Larsen
- A7 14.30 A double-blind randomized study of the effect of Japanese White Turmeric on symptoms of osteoarthritis of the knee and/or hip
Jens Rikardt Andersen

Frie foredrag – Sal B

Moderator: Pia Søe Jensen

- | | | |
|----|-------|---|
| B1 | 13.30 | Effects of the New Nordic Renal Diet in patients with chronic kidney disease: a randomized trial
Nikita Misella Hansen |
| B2 | 13.40 | Nurses' readiness for supporting complementary treatment with a plant-based diet
Line Birch Arvidsson |
| B3 | 13.50 | Sodium depletion and secondary hyperaldosteronism in outpatients with an ileostomy: a cross-sectional study
Charlotte Lock Rud |
| B4 | 14.00 | Malnutrition prevalence according to GLIM and its feasibility in geriatric patients: A prospective cross-sectional study
Rikke Lundsgaard Nielsen |
| B5 | 14.10 | Low-intake dehydration and agreement with malnutrition in geriatric patients: An observational study
Camilla Balle Bech |
| B6 | 14.20 | Low-intake Dehydration and relation to Nutrition Impacts Symptoms in Older Medical Patients - a retrospective cohort study
Anne Wilkens Knudsen |
| B7 | 14.30 | Nutrition impact symptoms are associated to Quality of Life in patients with lung cancer during 12 months of chemotherapy
Kirstine Guld Frederiksen |

Abstracts

Modtager af Nutricias Forskningslegat i Enteral Klinisk Ernæring 2022:

Accuracy of estimated versus measured resting energy expenditure in older hospitalized patients at the medical ward

Anne Wilkens Knudsen¹, Sofie Nunez Engelsted^{1,2}, Cecilie Meldgaard Møller¹, Cecilia M. Lund³, Charlotte Suetta⁴, Henrik Højgaard Rasmussen^{1,5}, Tina Munk¹

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³Department of Medicine, Copenhagen University Hospital, Herlev and Gentofte, Denmark.

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⁵Center for Nutrition and Bowel Disease, Aalborg University Hospital, Clinical Institute, Aalborg University.

Rationale: Indirect calorimetry (IC) is considered the Gold Standard to measure resting energy expenditure (mREE) in clinical practice. However, this method is more time-consuming than using estimates (eREE). Therefore, the aims of this study were to determine 1) the accuracy between estimated and measured energy requirement and 2) if specific variables were related to the difference between eREE and mREE.

Methods: The patient's mREE was assessed with IC until a minimum of 5 minutes with a Coefficient of Variation < 10% was obtained. The mREE was compared with eREE calculated from the Harris-Benedict (H-B) equation. A variation of $\pm 10\%$ was regarded as an acceptable variation value. The following variables were registered: Body Mass Index (BMI), body temperature, heart rate, Middle Arterial Pressure (MAP), Respiration Frequency (RF), p-C-Reactive Protein (p-CRP), p-leucocytes, p-albumin, and CRP/albumin-ratio.

Results: We included 110 patients (58% women), mean age 82 (± 7.8) years. Compared with IC the H-B equation underestimated with a mean of -286 kJ (± 969). Accordance between mREE and eREE was found in n=57 (52%). Using the H-B equation REE was overestimated in n=18 (16%) and underestimated in n=35 (32%) of patients. Underestimation by using the H-B equation compared with IC was significantly correlated with having a higher: p-CRP (p=0.002), heart rate (p=0.005), body temperature (p=0.023), p-leucocytes (p=0.048), and CRP/albumin-ratio (p=0.004). No significant correlation was found between underestimation and: BMI (p=0.086), MAP (p=0.401), RF (p=0.258), p-albumin (p=0.254).

Conclusions: By using the H-B equation about half of the patients differ more than $\pm 10\%$ from the measured energy requirement. Several infectious variables are correlated with an increase in REE compared with estimated by the H-B equation.

A1. Overnutrition among older nursing home residents: May some benefit from a nutritional intervention? - A cross-sectional study

T. Christoffersen,¹, A. M. Beck², I. Tetens³, A. W. Dynesen¹, M. D. Aaslyng¹

¹University College Absalon, Slagelse,

²Herlev and Gentofte University Hospital, The Dietetic and Nutritional Research Unit, EATEN, Herlev,

³Department of Nutrition, Exercise and Sports, Copenhagen University, Copenhagen, Denmark

Rationale: The obesity paradox indicates that not all older adults will benefit from weight loss interventions. A risk screening approach has been developed to identify older adults with overnutrition who may benefit from a nutritional intervention (1). The aim was to apply risk screening among nursing home residents to characterize those who may benefit from an intervention.

Methods: Participants were from six nursing homes. Data were collected including body composition (Bioelectrical impedance), physical function (chair stand test, and non-communicable disease (NCD). The residents were classified according to the approach, which includes a BMI \geq 25 and the presence of a minimum one physical function criterion, or one metabolic criterion (NCD). With analysis of covariates adjusted for sex and age, variables between groups were compared.

Results: A total of 116 residents participated. In total 52% had BMI \geq 25 kg/m². All residents with a BMI \geq 25 kg/m² had a minimum of one criterion present; 11.5% of participants had either NCD or low function and 88.5% had combined NCD and low function. Compared to residents with normal weight (\geq 18.5<24.9 kg/m²), this group had lower Fat-Free Mass percentage (FFM%) (31.7 vs. 33.8 %, p= .005) and FFM Index (16.4 vs. 17.2, p=.0004). This group had a higher fat mass (FM) (25.1 vs. 15.2 kg) and FM% (32.8 vs. 23.9 %), (all p < .0005).

Conclusion: Overnutrition is highly prevalent among nursing home residents and according to a new approach all might benefit from an intervention. The presence of NCD, lower FFM%, and FFMI, and higher FM, and FM% represent the complexity of overnutrition among residents and indicate that developing nutritional interventions are important next step for healthy aging.

A2. Unintended weight loss among COPD outpatients can contribute to worse one-year clinical outcomes

Sabina Mikkelsen¹, Søren Kveiborg Yde², Mia Solholt Godthaab Brath³, Line Birch Arvidsson¹, Mette Holst^{1,2}

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²Department of Clinical Medicine, Aalborg University, Sdr. Skovvej 15, 9000 Aalborg

³Department of Respiratory Diseases, Aalborg University Hospital, Mølleparkvej 4, 9000 Aalborg

Rationale: Unintended weight loss (UWL) is prevalent in chronic obstructive pulmonary disease (COPD), but little research has been done on UWL as an independent variable towards clinical outcomes. The aim of this study was to investigate the association between BMI groups and UWL regarding hospitalization, length of stay, exacerbations, quality of life (QoL) and mortality within one year, in hospital outpatients.

Methods: A prospective cohort study was performed at a Danish Hospital. In the study, 200 patients from the COPD outpatient clinic were enrolled between October 2020 and May 2021. At baseline, height and weight was measured. Patient-reported 5% UWL of bodyweight within three months was collected in a questionnaire and medical records were sought for disease specific information. At one year follow up, patients' medical records and patient telephone interviews were sought for weight, hospitalizations, EQ-5D-5L, number of non-hospitalization exacerbations and mortality. Data were analyzed using linear and cox hazard regression analysis.

Results: A total of 187 patients were eligible for follow-up (mean age 69.2 years, 43.9% males, median BMI 26.8 kg/m²). The prevalence of UWL was 13.4%. UWL was not associated with hospitalizations (NS), but an almost trifold risk of longer hospital stays (>5 days) (OR=4.0, p=0.008). Exacerbation was more frequent among underweight patients (OR=4.1, p=0.049). Additionally, UWL was associated with worse QoL, but only items of self-care, usual activities and pain/discomfort were significant (p=0.017, 0.036, 0.012). No difference in mortality was found between UWL and non-UWL (NS).

Conclusion: UWL as a solitary factor is associated with increased hospital length of stay, more exacerbations and worse QoL but not regarding mortality. The results emphasize that implementation of regular screening for UWL in addition to BMI might be beneficial to include in COPD outpatient settings.

A3. Effectiveness of a multidisciplinary transitional nutritional intervention on quality of life among acutely admitted older medical patients with malnutrition or risk of malnutrition: A randomized controlled trial

Aino L. Andersen^{1,2}, Morten B. Houliind^{1,3,4}, Rikke L. Nielsen^{1,2}, Lillian M. Jørgensen^{1,5}, Anne Kathrine Bengaard^{1,2,3}, Olivia Bornæs¹, Helle Gybel Juul-Larsen¹, Anne M. L. Pedersen⁶, Anne M. Beck⁷, Mette M. Pedersen^{1,2}, Janne Petersen^{1,8,9} and Ove Andersen^{1,2,5}

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⁷Dietetic and Nutritional Research Unit, Herlev-Gentofte University Hospital, Borgmester Ib Juuls Vej 50, 2730 Herlev, Denmark. E-mail: anne.marie.beck@regionh.dk

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Rationale: Malnutrition and risk factors for malnutrition are prevalent among acutely admitted older medical patients and have severe consequences. Consequently, we aimed to investigate the effectiveness of a multidisciplinary transitional nutritional intervention on quality of life compared with standard care.

Methods: The study was a block randomized, observer-blinded clinical trial with two parallel arms. The Intervention Group was offered a multidisciplinary transitional intervention consisting of dietary counselling and six sub-interventions targeting risk factors for malnutrition. The inclusion criteria were a Mini Nutritional Assessment score ≤ 11 , age ≥ 65 years, and an acute admittance to the Emergency Department. The primary outcome was the difference between groups in change in quality of life (EQ5D-5L) from baseline to 16 weeks after discharge. The secondary outcomes were intake of protein and energy, well-being, muscle strength and body weight.

Results: 130 participants were included. Compliance was generally low after discharge, ranging from 0 to 61%. No difference was found on the primary outcome, or on the secondary outcomes. Protein intake was higher in the Intervention Group during hospitalization (1.1 vs 0.8, $p=0.009$) and 8 weeks after discharge (1.1 vs 0.9, $p=0.02$). Additionally, the Intervention Group had a significantly higher percentual intake of their calculated protein requirements (93% vs. 76%, $p=0.04$) and calculated energy requirements (113% vs 93%, $p=0.02$) 8 weeks after discharge.

Conclusion: The intervention group increased their intake of protein and energy but did not improve their quality of life, well-being, muscle strength and body weight from admission to 8 or 16 weeks after discharge. Low compliance after discharge may have compromised the results.

A4. Individualised nutritional treatment increases the positive effects of a novel a la carte hospital food service concept: Results of a quasi-experimental study

Signe Loftager Okkels¹, Allan Stubbe Christensen¹, Trine Sølvsten¹, Alexander Erichsen¹, Ingeborg Krarup Rask¹, Kirstine Guld Frederiksen¹, Lone Viggers¹, Marianne Boll Kristensen¹

¹Department of Nutrition, Gødstrup Hospital, Herning, Denmark

Rationale: One-third of hospitalised patients are at nutritional risk, and limited choice regarding meals and meal times, as well as inadequate nutritional support may contribute to insufficient nutritional intake during hospitalisation. The aim was to test the effect of a novel á la carte hospital food service concept as a stand-alone intervention and combined with individualised nutritional treatment.

Methods: Inpatients at nutritional risk were recruited from a medical pulmonary ward for this three-arm quasi-experimental study. The control group received meals from the traditional buffet trolley food service system. Intervention group 1 (IG1) received meals from a novel á la carte food service concept with an electronic ordering system and nutritional intake record, whereas intervention group 2 (IG2) in addition to this received individualised nutritional treatment by a clinical dietitian. Nutritional intake and length of stay were measured, and patient satisfaction was assessed with purpose-designed questionnaires.

Results: 206 patients were included: 67 in the control group, 68 in IG1, and 71 in IG2. The proportion of participants consuming $\geq 75\%$ of both their energy and protein requirements was higher in IG1 compared to the control group (34% vs. 12%, $p=0.002$) and higher in IG2 compared to IG1 (53% vs. 34%, $p=0.035$). Length of stay was shorter in IG2 than in the control group (6.0 vs. 8.7 days, $p=0.005$). Being able to choose when and what to eat was important to participants, and this preference was met to a larger extent in the intervention groups.

Conclusion: The novel á la carte hospital food service concept increased energy and protein intake in patients at nutritional risk, and the positive effects were increased, when the concept was used as an integrated part of individualised nutritional treatment.

A5. "Når jeg er syg, vil jeg helst bare være alene" - patienters perspektiver på sociale måltider under indlæggelse på enestue

Ingeborg Krarup Rask¹, Kirstine Guld Frederiksen¹, Lone Viggers¹, Marianne Boll Kristensen¹

¹Afdeling for Ernæring, Regionshospitalet Gødstrup, Herning

Rationale: Måltider kan have stor social betydning, og studier indikerer, at sociale måltider (spisning med andre) under indlæggelse både kan opleves som fremmede og hæmmende for appetitten. På Regionshospitalet Gødstrup, hvor alle patienter har enestuer, er der under indlæggelse mulighed for sociale måltider i de etablerede caféområder, der kan bestilles mad til pårørende til spisning i café eller på stuen og der er på forsøgsbasis mulighed for virtuel samspisning mellem patient og pårørende. Dette kvalitative studie udforsker indlagte patienters perspektiver på sociale måltider under indlæggelse på enestue, rammerne herfor og værdien heraf.

Metode: Semistrukturerede interviews blev gennemført med 18 patienter indlagt på Sengeafsnit for Lungesygdomme eller Sengeafsnit for Kræftbehandling. Alle interviews blev lydoptaget, transskriberet ad verbatim og analyseret ved kvalitativ indholdsanalyse.

Resultater: Tre overordnede temaer blev identificeret: "*Tilpas alene*", "*For min pårørende*" og "*Enestuens tryghed*". Størstedelen af informanter oplevede ikke behov for eller lyst til at spise sammen med hverken medpatienter eller pårørende, og de havde spist alle måltider alene under indlæggelsen. Måltider med pårørende ansås som relevant, hvis det vurderedes at kunne gavne den pårørende, mens blufærdighed og manglende fysisk eller socialt overskud afholdt flere informanter fra at spise i caféområdet. Flere fremhævede, at sociale måltider potentielt kunne blive relevante, hvis de skulle være langtidsindlagte. Ingen af informanterne anså virtuel samspisning som relevant for dem selv, men det blev af flere informanter vurderet som interessant.

Konklusion: Behov for og lyst til sociale måltider under indlæggelse er begrænset hos patienter indlagt på enestue, men mulighed for sociale måltider under indlæggelse kan være relevant for langtidsindlagte patienter.

A6. Early Growth in Danish Children with Cystic Fibrosis

Karlen Bader-Larsen,¹ Daniel Faurholt-Jepsen,² Hanne Vebert Olesen,³ Tacjana Pressler,² Marianne Skov,^{2,4} Mette Frahm Olsen²

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Rationale: Improved treatment for cystic fibrosis (CF) over the past 2 decades, as well as the more recent implementation of newborn screening (NBS), have optimized opportunity for early growth. We aimed to describe changes in growth in Danish children with CF between 2000-2022.

Method: We assessed length/height and weight data of children aged 0-5 years from the Danish CF Cohort. Data were stratified to 4 birth cohorts born between 2000-2004, 2005-2009, 2010-2015, and after NBS introduction between 2016-2022. Weight-for-age (WAZ), height-for-age (HAZ), weight-for-height (WHZ) and body-mass-index (BMZ) z-scores were computed using WHO growth curves. Linear mixed-effects models were used to evaluate growth over 5 years between birth cohorts. Prevalence of moderate and severe stunting (HAZ <-2 and -3), wasting (WHZ <-2 and -3), underweight (WAZ <-2 and -3) and low BMI (BMZ <-2 and -3) were compared between birth cohorts.

Results: We included 255 children in the analysis. Overall, 40% of children had been underweight and 36% stunted during their first 5 years of life, but the prevalence decreased over time to 27% and 23%, respectively, in the most recent cohort. Linear models showed that earlier cohorts had low mean HAZ at diagnosis with catch-up growth until age 5, while the latest cohort followed linear growth reference curves. In line with this, earlier birth cohorts had low but increasing mean WAZ, WHZ and BMZ, whereas mean scores of children born after 2016 increased above reference levels (e.g., BMZ was 1.31 (1.10, 1.53) at age 5).

Conclusion: Advances in care for Danish infants and children with CF, such as the implementation of NBS, have allowed for significant improvements in early growth – with the most recent birth cohorts approaching potential for overweight. Nonetheless, malnutrition still occurs. Moving forward, careful nutrition management is crucial for navigating optimal growth in young patients with CF.

A7. A double-blind randomized study of the effect of Japanese White Turmeric on symptoms of osteoarthritis of the knee and/or hip

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Background: Pain associated with osteoarthritis is generally managed with paracetamol and NSAIDs (rescue medicine).

Purpose: The study aim was to test if the administration of Japanese White Turmeric (JWT) to patients with osteoarthritis could improve their physical activity by reducing pain and the need for rescue medication.

Methods: 120 patients with osteoarthritis of the knee and/or hip were randomized in a placebo controlled, parallel, double-blinded study. The intervention group received one capsule (12.8 mg) of JWT daily for an initial period of 3 months, with the possibility of continuing for an additional 3 months. The control group received placebo-capsules. Effect variables were pain, physical function, stiffness and global severity of the disease (PGAD); all scored on WOMAC questionnaires at baseline, and after 1, 2, 3 and 6 months. Intake of rescue medication was self-registered daily. All volunteers were instructed to reduce the consumption of rescue medication if possible.

Results: Treatment with JWT resulted in statistically significant reductions in pain after 3 ($p < 0.0003$) and 6 months ($p < 0.041$). Similar beneficial effects were observed for physical function (ADL) ($p < 0.028$) after 6 months, as well as for stiffness and PGAD after 3 and 6 months. The consumption of pain killers (paracetamol) was lowered by more than 60% after 3 months with active treatment ($p < 0.001$), and the same impact was observed for NSAIDs. Minor side effects were equally reported in both groups.

Conclusion: The herbal remedy, JWT significantly alleviates pain associated with osteoarthritis. The consumption of rescue medication was reduced by more than 60%.

B1. Effects of the New Nordic Renal Diet in patients with chronic kidney disease: a randomized trial

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Rationale: New Nordic Renal Diet (NNRD) is a whole food approach, with a reduced content of phosphorus, protein, and sodium. The aim was to explore the health effects of the NNRD in chronic kidney disease (CKD) stage 3-4.

Methods: A 26-week randomized trial comparing the effects of NNRD vs. habitual diet. The NNRD-group received weekly home delivery of food and recipes. Monthly study visits were conducted, including fasting blood samples, 24-hour urine, blood pressure and anthropometric measurements. The intention-to-treat analysis used linear mixed-effects models.

Results: Sixty patients (mean eGFR of 34 ml/min/1.73 m²) were included, 58 completed. The NNRD-group (n=30) reduced their 24-hour urine phosphorus excretion by 19% [153 mg (95% CI; -210, -95)], vs. an increase in the control group (n=30) by 18 mg (95% CI; -39, 76), between-group difference -171 (95% CI; -233, -109, p<0.001). Proteinuria was reduced by 39% [0.33 g/d (95% CI; -0.47, -0.18)], in the NNRD-group, vs. an increase of 0.02 g/d (95% CI; -0.12, 0.16) in the control group, between-group difference -0.34 (95% CI; -0.52, -0.17, p<0.001). P-urea was reduced by 1.5 mmol/L in the NNRD group (95% CI; -2.1, -0.9), vs. 0.1 mmol/L in the control group (95% CI; -0.8, 0.5), between-group difference -1.4 (95% CI; -2.0, -0.7, p<0.001). Systolic blood pressure fell by 5.2 mmHg in the NNRD-group (95% CI; -8.4, -2.1), vs. 1.4 mmHg in the control group (95% CI; -4.5, 1.8), between-group difference -3.9 (95% CI; -7.6, -0.2, p=0.04). The NNRD-group lost 1.5 kg (95% CI; -2.4, -0.6), vs. a weight gain of 0.6 kg in the control group (95% CI; -0.3, 1.4), between-group difference -2 (95% CI; -3.0, -1.1, p<0.001). There was no difference in eGFR between the two groups.

Conclusion: NNRD is effective and feasible in CKD. NNRD reduces phosphorus excretion, proteinuria, causes a small weight loss, and reduces systolic blood pressure.

B2. Nurses' readiness for supporting complementary treatment with a plant-based diet

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Rationale: Barriers may obstruct - and facilitators promote implementation of changes in healthcare and may be more pronounced in interventions with complementary treatments. Based on this knowledge, nurses' opinions were sought to gain knowledge on how these may impact the support towards a complementary intervention with an anti-inflammatory plant-based diet in patients with Crohn's, and what could ease the implementation.

Methods: Five focus group interviews seeking attitudes, barriers and facilitators for the implementation of a complementary intervention with an anti-inflammatory plant-based diet were conducted at four Danish hospitals between March 15. and April 30. 2022. A total of 27 nurses working in outpatient settings with patients with Crohn's disease in biological treatment, participated in the interviews. Data were analyzed using a hermeneutic analysis approach.

Results: The main findings of this study was that several barriers and facilitators may impact the implementation and possibly influence the patients' compliance. While *lack of knowledge* was a barrier, *pre-understanding, motivation, the professional-patient-relationship, professional experience* could be both barriers and facilitators for having an open attitude to support the intervention. Interviews provided proposals to facilitate the implementation. These were *early information, education, written information material, taste tests and facilitating a contact person from the ward between the study setting and nurses*.

Conclusion: Barriers and facilitators were related to the nurses as individuals as well as in common. Education, early involvement, tastings, visual materials, and a contact person between science and clinics, were articulated and may contribute to facilitate the implementation of an intervention with a plant-based diet, so that the nurses can support persons for the implementation of this complex intervention in patients with Crohn's disease.

B3. Sodium depletion and secondary hyperaldosteronism in outpatients with an ileostomy: a cross-sectional study

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Rationale: Patients with an ileostomy may experience postoperative electrolyte derangement and dehydration but are presumed to stabilise thereafter. We aimed to investigate the prevalence of sodium depletion in stable outpatients with an ileostomy and applied established methods to estimate their fluid status.

Methods: We invited 178 patients with an ileostomy through a region-wide Quality-of-Life-survey to undergo outpatient evaluation of their sodium and fluid status. The patients delivered urine and blood samples, had bioelectrical impedance analysis performed and answered a questionnaire regarding dietary habits.

Results: Out of 178 invitees, 49 patients with an ileostomy were included; 22 patients (45%, 95% CI, 31–59%) had unmeasurably low urinary sodium excretion (<20 mmol/L), indicative of chronic sodium depletion, and 26% (95% CI, 16–41%) had plasma aldosterone levels above the reference value. Patients with unmeasurably low urinary sodium excretion had low estimated glomerular filtration rates (median 76, IQR 63–89, mL/min/1.73m²) and low venous blood plasma CO₂ (median 24, IQR 21–26, mmol/L), indicative of chronic renal impairment and metabolic acidosis. Bioelectrical impedance analysis, plasma osmolality, creatinine and sodium values were not informative in determining sodium status in this population.

Conclusion: A high proportion of patients with an ileostomy may be chronically sodium depleted, indicated by absent urinary sodium excretion, secondary hyperaldosteronism and chronic renal impairment, despite normal standard biochemical tests. Sodium depletion may adversely affect longstanding renal function. Future studies should investigate methods to estimate and monitor fluid status and aim to develop treatments to improve sodium depletion and dehydration in patients with an ileostomy.

B4. Malnutrition prevalence according to GLIM and its feasibility in geriatric patients: A prospective cross-sectional study

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Rationale: In 2019, the Global Leadership Initiative on Malnutrition (GLIM) suggested a 2-step diagnostic format for malnutrition including screening and diagnosis. Prospective validation and feasibility studies, using the complete set of the five GLIM criteria, are needed. Aims of this study were to assess feasibility of GLIM in geriatric patients. Furthermore, we evaluated how malnutrition prevalence varied with mode of screening.

Methods: Consecutive patients from two acute geriatric wards were included. For screening risk of malnutrition, either the Mini-Nutritional Assessment-Short Form (MNA-SF) or Malnutrition Screening Tool (MST) were used. In accordance with GLIM, three phenotypic; i.e. non-volitional weight loss, low body mass index, and reduced muscle mass (calf circumference, mid-arm circumference or hand grip strength), and two etiologic; i.e. reduced food intake/assimilation, and inflammation/disease burden, were assessed. A combination of the two types was required for the diagnosis of malnutrition. Feasibility was determined based on % data completeness, and above 80 % completeness was considered feasible.

Results: One hundred patients (mean age 82 years, 58% women) were included. After screening with MNA-SF a higher rate of malnutrition was found, than after screening with MST; i.e. 51% and 35%, respectively (p=0.039). With no prior screening for malnutrition, 58% were malnourished according to GLIM. Using hand grip strength as a proxy for reduced muscle mass, 68% of the patients were malnourished. Feasibility varied between 70%-100% for the different GLIM criteria, with reduced muscle mass having the lowest feasibility.

Conclusion: In acute geriatric patients, the prevalence of malnutrition according to GLIM varied (35%, 51% and 58%) depending on the screening tool used. In this setting, GLIM appears feasible, besides for the criterion of reduced muscle mass.

B5. Low-intake dehydration and agreement with malnutrition in geriatric patients: An observational study

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Rationale: The prevalence of malnutrition and low-intake dehydration in geriatric patients are high. The etiological nature of these conditions makes it relevant to consider whether there might be an overlap. This study aimed to assess the agreement between low-intake dehydration and malnutrition.

Methods: Patients ≥ 65 years old and hospitalized at the geriatric hospital ward were screened for eligibility within 96 hours of admission. Dehydration was assessed with the calculated serum osmolarity ≥ 295 mmol/L ($1,86 \times (\text{Na}^+ + \text{K}^+) + 1,15 \times \text{glucose} + \text{urea} + 14$), and malnutrition was assessed with NRS-2002 ≥ 3 points, MNA-SF ≤ 7 points, MNA-LF < 17 , MUST ≥ 2 points, and GLIM after screening with NRS-2002 and MNA-LF. Statistics used were the Chi-squared test, Fishers-exact test, Wilcoxon signed rank test and calculation of kappa values.

Results: A total of 114 patients (57% females) were included. Median age 85.5 (IQR 80;89.25) years. A total of 49 (43%) were dehydrated. Fewer females were dehydrated (F:42,9% vs M:67,7%, $p=0.013$). The patients with osmolarity ≥ 295 mmol/L had a higher median weight (68.3 (IQR 58.5; 78.4) vs. 62 (IQR 51.8;72.1), $p=0.021$) and mid-up-arm circumference (27 (IQR 26;30) vs 25,5 (IQR 22,9;28,3), $p=0,004$). No significant difference was found in the prevalence of malnutrition between those with or without dehydration (NRS-2002; 70% vs. 81%, $p=0.174$; MNA-SF: 23.1 vs. 23.2%, $p=1.0$; MNA-LF: 37.1 vs. 30.2%, $p=0.644$; MUST: 24.5 vs. 33.8%, $p=0.308$; GLIM after screening with NRS-2002: 84.4 vs. 74.5%, $p=0.405$, GLIM after screening with MNA-LF: 74.1 vs. 75.6%, $p=0.438$). Kappa values varied around 0 and reflected low agreement.

Conclusion: We found low agreement between low-intake dehydration and malnutrition in a population of geriatric patients. All geriatric patients should therefore be assessed for both conditions.

B6. Low-intake Dehydration and relation to Nutrition Impacts Symptoms in Older Medical Patients - a retrospective cohort study

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Rationale: Malnutrition and low-intake dehydration both increase complications and mortality in hospitalized older medical patients. Nutrition Impact Symptoms (NIS) are barriers for obtaining an adequate nutritional intake, but little is known about the association to dehydration. Therefore, we aimed to assess the prevalence of low-intake dehydration and NIS, and the relation between low-intake dehydration and NIS.

Methods: Participants were older patients (≥ 65 years) from the Medical Department at Herlev-Gentofte Hospital referred to a clinical dietitian. Sex, age, BMI, prevalence of nutritional risk (NRS-2002), low-intake dehydration (≥ 295 mOsm/L, $\text{osmolarity} = 1.86 \times (\text{Na}^+ + \text{K}^+) + 1.15 \times \text{glucose} + \text{urea} + 14$), and NIS (the EATEN-questionnaire, comprising 16 NIS-questions and whether these were respectively present and limiting nutritional intake) were collected.

Results: We included 99 patients (60% women), mean age 81 years (± 7.9), median BMI 21.8 kg/m² (IQR: 19.5-25.4). Nutritional risk was found in 74%, and low-intake dehydration in 40% of the included patients. The three most frequent NIS-present were: Early satiety (84%), no appetite (82%), and tiredness (72%). The three most frequent NIS-limiting intake were: No appetite (73%), early satiety (69%), and dry mouth (42%). We found low-intake dehydration to be related to a lower prevalence of the following NIS-present; dry mouth (58% vs. 80%, $p=0.021$), and breathlessness (24% vs. 49%, $p=0.018$). Among the NIS-limiting intake a lower prevalence of other pains was related to low-intake dehydration (7% vs. 29%, $p=0.023$).

Conclusions: NIS and low-intake dehydration are frequent in older patients. Low-intake dehydration is inversely related with the NIS-present: dry mouth and breathlessness. Low-intake dehydration is inversely related with the NIS-limiting intake: other pains.

B7. Nutrition impact symptoms are associated to Quality of Life in patients with lung cancer during 12 months of chemotherapy

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Rationale: Patient reported outcome measures (PROMs) gain information about patients' symptoms and may facilitate targeted nutritional interventions. We aimed to explore the associations between Nutrition Impact Symptoms (NIS) and Quality of Life (QoL) in patients with lung cancer during 12 months of chemotherapy.

Methods: In this retrospective cohort study, NIS and QoL were reported by outpatients diagnosed with lung cancer at baseline and at 12 months after initiation of chemotherapy. Descriptive analysis and linear regression analysis, adjusted for sex and age, were performed to explore the association between QoL and NIS.

Results: Data reported from 934 patients (52% men), median age 70 (range: 32 to 90) years, body mass index (BMI) 24.7 kg/m² (range: 13.1 to 48.5) were included and 192 remained available for follow-up at 12 months. At baseline, 88% reported reduced QoL, while at 12 months, this was reported in 95.8% ($p < 0.0001$). The prevalence of reported moderate to severe NIS at baseline were: Fatigue 44%, limitations in social- and work life 36.7%, daytime rest 30.8%, pain 29%, respiratory disturbances 28%, loss of appetite 24%, and nausea 11%. Nausea, was significantly associated at baseline but not at 12 months ($B = -1.07$ [95%CI -1.37; -0.77] and $B = -1.08$ [95%CI -2.30; 0.13]). Fatigue, limitations in social- and work life, day time rest, pain, respiratory disturbances and loss of appetite were significantly associated to reduced QoL at baseline and at 12 months of chemotherapy ($p < 0.001$).

Conclusion: QoL was highly affected by fatigue, limitations in social- and worklife, daytime rest, pain, respiratory disturbances, and loss of appetite

which are common NIS in outpatients diagnosed with lung cancer, at baseline and at 12 months follow up. This indicates the importance to address NIS throughout the trajectory of lung cancer treatment.

P1. Optimizing preoperative nutrition and physical function in colon cancer patients

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Background and aim: Low body mass index and recent weight loss have a major negative impact on post-operative course with high risk of postoperative complications and mortality. Prehabilitation offers patients to positively manage the period before surgery to promote postoperative recovery and physical condition. This study aims to assess the feasibility of a prehabilitation programme. Furthermore, the study aims to investigate the effect of guidance regarding physical activity and nutrition on patients' perioperative course, post-operative recovery, and quality of life after colonic cancer resection.

Method: The study is a feasibility study. Patients with colon cancer admitted to our department for elective surgery are included. The intervention is verbal and written advice on daily exercise as well as nutritional supplement of 3 nutrition drinks daily until surgery. Patients in the control arm will receive standard care and standard advice regarding exercise and nutrition. Pre- and post-operative course will be evaluated using validated questionnaires and medical journals. We expect to include 100 patients.

Results: The preliminary results will be available for DSKE annual meeting 2023. Results are expected in the summer of 2023. Endpoints are changes in body weight, compliance with the intervention, patient satisfaction, length of hospital stay, post-operative recovery after 14 days, and quality of life.

Conclusion: We will evaluate compliance regarding specific advice on exercise and nutrition and to explore, if engaging patients in their own health will have a positive impact on quality of life after a diagnosis of colon cancer. Additionally, we expect to identify short-term effects of prehabilitation on post-operative recovery and complications to surgery for colon cancer.

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P2. Tværsnitsundersøgelse af måltidsmønsteret hos indlagte ernæringsrisikopatienter på Afdeling for Blodsygdomme, Rigshospitalet

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Formål: Observationel undersøgelse af måltidsmønster, måltidsfrekvens og døgnrytme hos indlagte hæmatologiske patienter i ernæringsrisiko på Afdeling for Blodsygdomme på Rigshospitalet.

Metode: Over et forløb på 3 uger er der 10 gange gennemført tværsnitsundersøgelse af kostindtaget hos patienter i peroral ernæringsterapi. Ekskluderet er således patienter, der suppleres med sonde- og parenteral ernæring. Kostregistreringerne er efterfølgende blevet analyseret gennem deskriptiv statistik. Samtidigt med kostregistreringen af patienterne blev kvalitative data fra såvel samtaler med patienter og ansatte, men også øvrige observationer relateret til måltidsmønster, døgnrytme og kostkoncept indsamlet.

Resultat: Der blev inkluderet 52 patienter i undersøgelsen. 19% af patienterne indtog 6 måltider eller mere svarende til anbefalet måltidsfrekvens, mens 63% af patienterne indtog fire eller fem måltider dagligt. Der var en tendens til, at patienterne spiste forskudt af hovedmåltiderne, særligt udtalt for morgenmåltidet. 21% af patienterne indtog et måltid fra morgenbuffeten, mens henholdsvis 63% og 65% af patienterne indtog et måltid i forbindelse med serveringen af frokost og aftensmad. Det blev observeret og italesat af patienter og ansatte, at sengeafsnittets døgnrytme og kostkonceptets struktur ikke understøtter patienternes ernæring.

Konklusion: Måltidsmønsteret for indlagte, hæmatologiske patienter i ernæringsrisiko på Afdeling for Blodsygdomme på Rigshospitalet var karakteriseret ved at fordele sig i tidsrummet kl. 8-21 med hyppigst forekommende 4-5 daglige måltider, men dette i mindre grad fordelt som hoved- og mellemmåltider. Særligt frokost og aftensmad blev aktivt fravalgt på baggrund af mismatch mellem kost- og patientpræferencer, mens morgenmaden i højere grad mødte patienternes præferencer, men strukturelt ikke flugtede patienternes og sengeafsnittets døgnrytme.

P3. Effekt af smagstest i den diætetiske vejledning af patienter med malignt lymfom i cytostatisk behandling

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Baggrund: Patienter med hæmatologisk cancer i cytostatikabehandling har vanligvis store ernæringsproblemer. Vi ved, at patienternes smagssans er markant ændret i denne situation.

Formål: At undersøge om en simpel smagstest i tillæg til kostanamnesen kunne bedre den diætetiske vejledning og bedre patienternes indtagelse af energi og protein.

Metode: Randomiseret, enkelt blindet studie med en interventions- og kontrolgruppe med 9 i hver gruppe, 11 mænd, 7 kvinder, 48-87 år med malignt lymfom. Forsøgsperiode 4 uger med endepunkter: fedtfri masse, (bioimpedansmåling), håndgribestyrke ved start og slut samt indtag og livskvalitet (EORTC QLQ C-30) samt gener i munden.

Interventionen: smagstest, diætetisk vejledning baseret på smagstest resultatet, 3 spørgeskemaer omhandlende smagstesten

Kontrolgruppen blev vejledt efter almindelig standard. Telefoniske opkald en gang ugentligt med 24-timers kostinterviews samt vejning.

Resultater: Ingen signifikante forskelle mellem grupperne i nogen af endepunkterne.

Konklusion: Der fandtes ingen markante gevinster ved at basere den diætetiske vejledning på en smagstest hos patienter med malignt lymfom i cytostatisk behandling

P4. A systematic review and meta-analysis of the effects of vitamin D on inflammatory and clinical outcomes in patients with rheumatoid arthritis (RA)

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Background: Vitamin D deficiency is commonly in patients with rheumatoid arthritis, and a meta-analysis based on observational data showed that vitamin D supplementation reduced disease activity.

Aim: To investigate whether vitamin D supplementation affects the inflammatory and clinical outcomes in patients with rheumatoid arthritis.

Material and Methods: Literature was searched in the Cochrane Central Register, PubMed, MEDLINE, Embase, and Google Scholar. Cochrane guidelines were used with a random effects model. Of 464 publications, 11 studies were included (3049 patients). All with a placebo or a different dose of vitamin D as controls. Only one study used vitamin D with calcium.

Results: Vitamin D supplementation did not reduce C-reactive protein (CRP), erythrocyte sedimentation rate (ESR), disease activity score in 28 joints (DAS28), or health assessment questionnaire score (HAQ), but heterogeneity was marked. Vitamin D significantly reduced pain in VAS, DAS28–CRP, and DAS28–ESR. Subgroup analysis for vitamin D doses (>100 µg per day versus <100 µg per day) showed, that high doses had better effect on CRP than the low doses ($P < 0.05$). There was no dose effect on ESR and DAS28. Subgroup analysis for blinded versus open-label design showed no effect on CRP, but some effect on ESR ($P = 0.08$). The open-label study design had a significant effect on pain-VAS.

Conclusions: There are minor effects of Vitamin D supplementation to patients with rheumatoid arthritis. In future studies, factors such as sun exposure, drug interaction, and dosage of vitamin D should be included.

P5. Hvad sker der metabolisk (metabolomics) i forløbet af septisk- eller kardiogent shock med plasma laktat >2,5 mmol/l ved inklusion.

Præliminære resultater

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Baggrund: Forhøjet laktat i blodet hos patienter med shock er tæt relateret til dødelighed, men patofysiologien er ikke klarlagt. Her ønskede vi at beskrive udviklingen i den metaboliske profil hos patienter med shock ved hjælp af untargetet metabolomics fra arterielt laktat > 2,5 mmol/L til <2,0 mmol/L.

Materiale: Vi analyserede i alt 22 serum prøver fra 7 patienter (4 kvinder, alder gns: 65 år (SD 13,6)) med arteriel laktat gns 2,7 mM (SD 1,02) og multiorgan dysfunktion (Sequential Organ Failure Assessment (SOFA) score gns 10,5 (SD 3,6)). 4 patienter havde behov for respirator behandling, 5 behov for noradrenalin og 3 døde under indlæggelse.

Metode: Serum blev analyseret ved untargetet metabolomics vha. Væskekromatografi (LC) og Massespektrometri (MS). Alle signifikante udslag på vores spektra blev analyseret. Sammenhænge er testet ved univariat variansanalyse. Stoffers identitet blev kvalitetssikret med Tandem Massespektrometri MS/MS. S-pyruvat og hydroxybutyrat blev kvantificeret separat ved LC-MS

Resultater: S-laktat faldt praktisk taget lineært over inklusionsdagene. Der fremkom ikke stigning i s-pyruvat samtidigt med laktatmetabolisme. Hvilket ikke tyder på øget glukoneogenese i serum, men intracellulært vides det ikke.

S-methionin var modsat korreleret til s-laktat.

S-2PY steg signifikant i relation til sygdomsgrad. Kan være fordelagtigt på kort sigt for NAD⁺/NADH-ratio.

S-isoleucin korrelerer med s-laktat fald.

Di-carboxylsyrer kan muligvis relateres til laktatmetabolisme ved laktat > 8 mmol/L.

Konklusioner: Vores resultater tyder på, at en række sygdomsmarkører kan relateres til kompensatoriske mekanismer ved shock. Øget subtratbehov kan skyldes nedsat energitilgængelighed ved tidlig shock og korrelerer med en katabol tilstand, hvor muskelhenfald kompenserer for nedsat glykolyse. Et yderligere bidrag til energi depletningen er reduceret glukoneogenese ved shock tilstande formentlig grundet lever- og nyresvigt.

P6. Opsporing af og ernæring til patienter med dysfagi

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Rationale: Patienter med dysfagi skal rettidigt opspores og have korrekt konsistensmodificeret diæt. I Koncept for Mad og Måltider findes et digitalt madbestillings- og kostregistreringssystem (Min Mad), som skal sikre at patienter får serveret den ordinerede diæt.

Dette studie klarlægger nuværende praksis ift. screening for dysfagi, ordination og anretning af mad og drikke til patienter med dysfagi på Stroke afsnittet, Afdeling for Neurologi og fysio-og ergoterapi.

Metode: Journalaudit blev gennemført til klarlægning af praksis ift. screening og ordination af kostform. Der blev gennemført observationsstudie af overensstemmelse mellem ordination af konsistensmodificeret diæt i patientjournalen (EPJ) og i Min Mad, og dette blev sammenholdt med det anrettede mad fra afsnitskøkkenet. Spørgeskemaundersøgelse omkring viden om og tryk i at håndtere diæter med modificeret konsistens blev udført blandt det køkkenfaglige personale.

Resultater: Journalaudit på 50 patientforløb viste at der hos 20% ikke var foretaget screening for dysfagi i henhold til retningslinjerne og at 14% af patienterne havde fået mad og/eller drikke inden screening. Observationsstudie over 7 uger på 26 patienter viste 36% uoverensstemmelse mellem ordinationen i EPJ og Min Mad, og uoverensstemmelse i en tredjedel af observationerne (3 ud af 9) mellem diæten i Min Mad og den færdige anretning. Spørgeskemasvar fra 18 køkkenfaglige medarbejdere viste, at de "i nogen grad" følte sig trygge i relation til madens konsistenser og "til dels" trykke i fortykning af væsker.

Konklusion: Servering af den rigtige mad og drikke til patienter med dysfagi er en kompleks tværfaglig opgave med risiko for fejl flere steder. Indeværende undersøgelse viser, at udfordringerne med at sikre rettidig screening og korrekt anrettet diæt både skyldes arbejdsgange samt viden hos de medarbejdergrupper, som er involveret i opsporing af dysfagi, anretning og servering af maden.

P7. Bioelectrical impedance analysis as a clinical marker of health status in adult patients with benign gastrointestinal disease: a systematic review

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Rationale: Body composition reflects nutritional status, disease status and progression, and treatment responses. Mounting evidence supports the use of bioelectrical impedance analysis (BIA) as a non-invasive tool to assess body composition. Patients with benign gastrointestinal (GI) disease experience disease-related alterations in their body composition, and bioimpedance outcomes in patients with benign GI diseases have not previously been summarized. We aimed to evaluate BIA as a clinical body composition marker for benign GI diseases and describe its association with physical health status.

Method: We systematically searched PubMed, Scopus, Web of Science, Embase, and CINAHL from inception to February 2023 (PROSPERO registration: CRD42021265866). The main outcome was raw impedance data.

Results: Of 911 screened studies, 25 studies were included in the final analysis, comprising a total of 2,374 adult patients with benign GI disease. The most frequently reported BIA outcome was phase angle (PhA) (reported in 17 of 25 studies), followed by fat-free-mass (FFM) (reported in 12 of 25 studies).

Conclusion: The consensus view of the included studies illustrates that BIA can be a useful tool for evaluating body composition in patients with benign GI diseases, and low PhA and FFM were associated with increased nutritional risk, abnormal physical characteristics, and increased mortality risk. To fully utilize BIA as a clinical marker of health in patients with benign GI disease, standardized protocols specific to this population are needed.

P8. Appetite stimulation with cannabis-based medicine and methods for assessment of glomerular filtration in older patients with medical illness: a study protocol

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Background and aim: Malnutrition in older patients is linked to poor appetite. Cannabis-based medicine may have orexigenic properties in older patients, but this has to our knowledge never been investigated. In older patients, uncertainty applies to the accuracy of estimated glomerular filtration rate

(eGFR) based on creatinine, which is crucial for medication prescribing. In older patients with poor appetite, the study aims 1) to assess the efficacy of Sativex® (8.1 mg delta-9-tetrahydrocannabinol (THC) and 7.5 mg cannabidiol (CBD)) to stimulate appetite and 2) to compare the performance of various GFR-estimates and measured-GFR (mGFR) for determining gentamicin clearance utilising population pharmacokinetic (popPK) modelling methods.

Methods and objectives: This study is composed of two sub-studies. Sub-study 1 is an investigator-initiated single-center, double-blinded, randomised, placebo-controlled, superiority, cross-over study. Sub-study 1 will recruit 17 older patients with poor appetite, who will also be invited to sub-study 2. Sub-study 2 is a single-dose pharmacokinetics study and will recruit 55 patients. Participants will receive Sativex® and placebo in sub-study 1 and gentamicin with simultaneous measurements of GFR in sub-study 2. The primary endpoints are: sub-study 1) difference in energy intake between Sativex® and placebo conditions, and sub-study 2) accuracy of different eGFR equations compared to mGFR (sub-study 2). The secondary endpoints include safety parameters, changes in the appetite hormones, total ghrelin and GLP-1 and subjective appetite sensations and the creation of popPK models of THC, CBD, and gentamicin

P9. Clinical dietician as a part of the interdisciplinary team at a hospital ward

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Rationale: During pronounced shortage of nurses a clinical dietician was responsible for carrying out nutritional care related assignments. The aim of this study was to assess the effects hereof on nutrition care.

Methods: A clinical dietician was part of the interdisciplinary team at the gastroenterological ward to effectuate weight measuring, nutritional risk screening (NRS), diet registration (DR), providing in-between meals, nutritional therapy etc. from April-December 2021. Data were collected retrospectively by journal audit and on all inpatients from August and September 2020 (prior to including a clinical dietician at the ward) and 2021 (after including a clinical dietician at the ward). Proportions were compared using chi² test. Significance was assumed at p<0.05.

Results: A total of 128 patients were included, n=74 in 2020 and n=54 in 2021. NRS was conducted in 18% in 2020 (11% at risk) vs. 83% in 2021 (67% at risk) (p<0.001). DR of patients at risk was performed in 18% in 2020 and 97% in 2021 (p<0.001). In patients with an oral calorie intake of <50%, supplemental nutritional therapy (SNT) was provided to 43% in 2020 vs. 55% in 2021 and total nutritional therapy (TNT) was provided to 0% in 2020 vs. 27% in 2021. In patients with an oral calorie intake of ≥75%, SNT was provided to 64% in 2020 vs. 8% in 2021 (p<0.05) and TNT was provided to 21% in 2020 vs. 0% in 2021. In patients with unregistered food intake, SNT was given to 27% in 2020 vs. 9% in 2021 and TNT was given to 8% in 2020 vs. 39% in 2021 (p<0.01). Weight loss of ≥5% during hospitalisation was present in 22% in 2020 vs. 7% in 2021 (p<0.05).

Conclusion: A clinical dietician in the interdisciplinary team was beneficial for detecting patients at nutritional risk, targeted nutritional care, and preventing weight loss during hospital stay.

Conflict of interest: None of the authors has conflicts of interest to disclose

P10. Kostbegrænsende faktorer hos indlagte geriatriske patienter

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Formål: At undersøge forekomsten af kostbegrænsende faktorer / nutrition impact factors (NIS) hos indlagte geriatriske patienter.

Metode: Alle patienter indlagt mellem 28. marts og 22. april 2022 blev inkluderet bortset fra patienter med somnolens, demens, delirium eller sprogbarriere. Patienterne blev på indlæggelsens 2. eller 3. dag mundtligt stillet spørgsmålene i Eating Symptoms Questionnaire (ESQ) [1] af en sygeplejestuderende, der registrerede svaret direkte i Redcap.

Resultater: Ud af 121 indlagte patienter deltog 84 (69,4%) i undersøgelsen. Patienterne havde en gennemsnitsalder på 85,1 år (SD 7.2) og 57 (67,9%) var kvinder.

Indlæggelsesårsager: infektion 25 (29,8%), apopleksi 18 (21,4%), hoftenært lårbensbrud 14 (16,7%), fald eller rygsmerter 10 (11,9%), hjertesvigt 8 (9,5%), gastro-intestinale problemer 6 (7,1%) og dehydrering 3 (3,6%).

Gennemsnitligt antal NIS/patient: 3,2 (SD 2.4)

Forekomsten af NIS: kvalme 31 (36,9%), opkastninger 20 (23,8 %), ondt i maven, 22 (26,2%), diarre 27 (32,1%), forstoppelse 27 (32,1%), smerter i munden 10 (11,9%), mundtørhed 52 (61,9%), Ondt/smerter, der påvirker appetitten 17 (20,2 %), svært ved at tygge 24 (28,6%), svært ved at synke 11 (13,1%), maden har smagt underligt eller slet ikke smagt mig 16 (19,0%), generet af lugte 5 (6%), smerter, der hindrer spisning 11 (11,9%), andre gener, der påvirker appetitten eller hindrer spisning 15 (17,9%).

Konklusion: Kostbegrænsende faktorer er hyppige hos geriatriske patienter. Mange af faktorerne kan potentielt lindres eller fjernes og der bør være opmærksomhed på lindring af kostbegrænsende faktorer i ernæringsbehandlingen hos geriatriske patienter.

1. Nordén, J., et al. (2015). "Nutrition impact symptoms and body composition in patients with COPD." *Eur J Clin Nutr* 69(2): 256-261.

P11. Metabolic stress in patients with acute severe ulcerative colitis - a single-center cohort study

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Background: Acute severe ulcerative colitis (ASUC) is characterized by systemic inflammation which may initiate an acute-phase response leading to hypercatabolism. Patients with ASUC are usually treated with high-dose steroids that may further accelerate the metabolic response and lead to hyperglycemia and insulin resistance, but the degree of synergy is unknown.

Aim: To measure the degree of metabolic stress including insulin resistance in patients with ASUC during admission and three weeks after discharge.

Methods: This was a single-center cohort study where we included patients with ASUC, defined and assessed by Truelove and Witt's criteria. Indirect calorimetry, bioelectrical impedance analysis and the homeostatic model assessment for insulin resistance (HOMA-IR) were applied at baseline and at follow-up three weeks after discharge.

Results: Of 22 patients admitted during the project period, 15 gave consent, and 11 completed the study. Median C-reactive protein at inclusion was 30.9 mg/L [4.0; 154.7]. Both median HOMA-IR and fasting plasma glucose were markedly increased at inclusion (median 7.68 [1.84; 19.61] and 7.2 [5.0; 10.5], respectively, and both had statistically significant decreased three weeks after discharge ($p=0.0036$ and $p=0.0039$, respectively). No statistically significant differences were observed in resting energy expenditure or anthropometric measurements from baseline to follow-up.

Conclusion: Patients with ASUC presented with marked insulin resistance, indicating that the days following admission and high-dose steroid treatment are particularly vulnerable. Although significantly reduced at three-weeks follow-up, most remained relatively insulin resistant compared with relevant control groups. No differences in resting energy expenditure or body composition in the same period were observed.

P12. Magnesiumstatus og effekt af supplement hos patienter med akut svær colitis ulcerosa

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Baggrund: Akut svær colitis ulcerosa (ASUC) er forbundet med hyppige og blodige diarréer, hvilket alene eller i kombination med reduceret kostindtag kan give magnesiummangel. Formålet med studiet var at undersøge magnesiumstatus hos patienter med ASUC og hvorvidt peroral magnesiumbehandling kan revertere magnesiummangel.

Metode: Enkelt-center open label randomiseret klinisk forsøg. Hos 13 voksne patienter med ASUC foretog vi ved indlæggelse magnesiumretentionstest med døgnurinopsamling i to konsekutive døgn, intravenøs behandling med 0,5 mmol magnesiumsulfat/kg i andet døgn samt beregning af retentionsgrad. Patienter med retention >25% blev randomiseret 1:1 til mikstur magnesiumacetat tetrahydrat (0,5 mmol/ml), 20 ml x 3 (30 mmol/dag), eller intet tilskud med kontrol retentionstest efter tre uger. Evt. bivirkninger registreres i dagbog. Kontrolgruppen fulgte vanlig praksis (intet magnesiumsupplement).

Resultater: Ved baseline var median p-magnesium (mmol/l) 0,83 [range 0,64-0,91] og indenfor referenceintervallet hos 92 % af patienterne (n=12). Heraf havde ni (75%) retention >25% [range 27-74%] og fire (33%) >50%. Median retention var 46% [range 14-74%]. Af de ni med retention >25% blev seks randomiseret til peroralt tilskud og to til intet tilskud. Tre i interventionsgruppen var lost to follow-up pga. kolektomi (n=1), manglende analysesvar (n=1) og manglende fremmøde (n=1). Ved en parret analyse fandtes ingen signifikante forskelle i median Δ U-magnesium (mmol/l) 2,38 [range 2,36-2,39], Δ p-magnesium (mmol/l) 0,11 [range -0,09-0,15] og retention (%) 12,2 [range -10,7-58] i behandlingsforløbet i interventionsgruppen (n=3) og ingen forskel mellem grupperne.

Konklusion: Magnesiummangel er hyppigt ved ASUC og afsløres ikke af p-magnesium, der ofte er normalt. Vi fandt i dette lille pilotstudie ingen effekt af peroralt magnesiumtilskud 30 mmol/dag gennem tre uger målt ved retentionstest.

Posters

P1. Optimizing preoperative nutrition and physical function in colon cancer patients

Optimizing preoperative nutrition and physical function in colon cancer patients

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Background

- Colon cancer is one of the most prevalent types of cancer worldwide
- Today, surgery is the only curative treatment for colon cancer
- Fragile patients may not be in condition to undergo a major surgery
- Low body mass index and recent weight loss have been shown to have a major negative impact on post-operative course, increasing the risk of postoperative complications and mortality. Moreover, prolonged postoperative recovery and complications to colon cancer surgery have been shown to have a negative impact on quality of life
- Pre-habilitation helps patients to positively manage the period before surgery to promote better postoperative recovery and physical condition

Aim

To assess the feasibility of a prehabilitation programme, and the effect of information and guidance regarding physical activity and nutrition on patients' perioperative course, and post-operative recovery and quality of life after resection for colon cancer.

Method

- Feasibility study
- Including patients undergoing resection for colon cancer at the Surgical Department, Regional Hospital Randers
- Inclusion period from September 2022 - June 2023
- Expected: 100 participants

Results

Participations so far (april 2023):

89 patients included → 51 patients completed

13 patients in progress

25 patients excluded

Results are expected in summer 2023

Outcomes:

- Patient compliance and general satisfaction
- Weight difference from colonoscopy to surgery
- Length of hospitalization after colon cancer resection
- Post-operative recovery (Quality of recovery-15)
- Quality of life (EQ-5D-5L)

Perspectives

We expect to obtain knowledge of the feasibility of a prehabilitation programme, and of short-term effect of pre-habilitation on postoperative recovery and complications to surgery for colon cancer.

Additionally, the study may provide knowledge about:

- Colon cancer symptoms

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Legat- og prisuddeling i Dansk Selskab for Klinisk Ernæring

Jens Kondrup Prisen

Dansk Selskab for Klinisk Ernæring indstiftede d. 21. maj 2015 Jens Kondrup Prisen. Prisen kan uddeles én gang årligt ved Årsmødet for Klinisk Ernæring.

Med prisen følger 10.000 kr.

Prisen kan tildeles et medlem af DSKE, som har gjort en forskel inden for behandling af sygdomsrelateret underernæring.

Kriterier, som indgår i vurdering af indstillede kandidater:

- Gennemførelse af klinisk betydende projekt eller intervention med udbredelsesmulighed
 - Aktiv behandling eller forskning inden for sygdomsrelateret underernæring
- Internationale perspektiver af forskning inden for sygdomsrelateret underernæring

I 2022 blev Mette Borre tildelt Jens Kondrup Prisen.

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DSKE uddeler ved årsmødet i klinisk ernæring Nutricias forskningslegat i enteral klinisk ernæring. Legatets formål er at fremme dansk baseret praksisnær forskning inden for enteral klinisk ernæring og appellerer til ansøgere fra både primær og sekundær sundhedssektor. Ansøger skal være DSKE-medlem.

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Dansk Selskab for Klinisk Ernæring (DSKE) uddeler 3 legater på hver op til 5.000 kr. til deltagelse i ESPEN kongressen i Lyon, 11-14. september 2023. Legaterne kan søges af DSKE-medlemmer, der har fået antaget et abstract til præsentation på kongressen – det kan være enten som poster eller som foredrag. Modtagelse indebærer, at DSKE dækker dokumenterede udgifter for registreringsgebyr, transport og hotelophold under kongressen for op til 5.000 kr. Øvrige udgifter, fx forplejning, dækkes ikke af legatet. Der uddeles max 1 legat per abstract.

Et af legaterne uddeles til det abstract som kåres som bedste abstract til Årsmødet

Kommende DSKE-arrangementer

d. 7. september kl. 15.30-18.30

Initiativmøde om sygdomsrelateret underernæring i almen praksis
Afholdes på Aalborg Universitetshospital, tilmelding ikke nødvendigt

d. 25. september kl. 9.30-15.45

Temadag: Ernæringspleje i praksis
Afholdes på Hvidovre Hospital, tilmelding åbner snarest.

Se mere på www.dske.dk under "Arrangementer".