Dansk Kirurgisk Selskab

ABSTRAKTER

Frie foredrag

DANSK KIRURGISK SELSKABS ÅRSMØDE 08.-09. NOVEMBER 2018
ABSTRAKTER – KRC – Frie foredrag

F1

Colorectal cancer in familial adenomatous polyposis: Results from the Danish Polyposis Registry

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Background: Familial adenomatous polyposis (FAP) is an autosomal dominant disorder that predisposes to colorectal cancer (CRC). The Danish Polyposis Registry is a nationwide, complete registry of FAP patients. We aimed this study to assess efficacy of the surveillance program including the incidence, prevalence, and crude survival rates of CRC for Danish FAP patients.

Methods: Data was collected from the Danish Polyposis Registry and the periods 1990-99 and 2000-17 were compared. Probands were defined as patients diagnosed due to bowel symptoms and without any knowledge of hereditary bowel disease. Call-up patients were defined as screen detected patients diagnosed at prophylactic examination due to FAP diagnosis in first degree relatives.

Results: By the end of 2017, the registry comprised 226 families with 721 affected individuals. While the mean annual incidence rate of FAP was stable from 1990-99 (0.19/100,000/year) to 2000-17 (0.32/100,000/year) (p=0.91), the point prevalence increased significantly from 4.86/100,000 in 1999 to 6.11/100,000 by the end of 2017 (p=0.005). During the period 2000-17, FAP related CRC constituted 25/72,218 of all CRC cases (0.03%), which was a significant decrease from 1990-99 (26/30,005 cases, 0.09%) (p=0.001). The risk of CRC was significantly higher for probands (n=191, 61.6%) compared to call-up cases (n=5, 1.9%) (p<0.001). All CRCs in call-up patients were detected at the initial evaluation. Thus, no cases were identified in the surveillance program. Being a proband was associated with an increased risk of death compared to call-up patients (odds ratio: 14.1 (95% CI, 9.5-20.8), p<0.001) and the life expectancy for probands differed significantly from call-up patients (69.9 years, 95% CI, 66.9-72.9 *vs* 56.1 years, 95% CI, 53.6-58.6, p<0.001). Hence, an appropriate tracing and surveillance program prolong life expectancy with 13.4 years for first-degree family members.

Conclusions:

The Danish Polyposis Registry enables close monitoring of FAP patients resulting in a minimized risk of CRC and a prolonged life expectancy within the surveillance program.

F2

Screening og systematisk opfølgning for kardiopulmonal komorbiditet ved elektiv kirurgi for kolorektal cancer. En randomiseret gennemførlighedsundersøgelse

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Baggrund
Ca. en tredjedel af patienter med kolorektalcancer (KRC) har komorbiditet, og det påvirker deres outcomes negativt, bl.a. med højere dødelighed inden for det første år. Scoresystemer kan nok prædiktere mortalitet, men evidensen for konkrete interventioner er sparsom. Vi ønskede at teste et trial setup til at belyse, om postoperativ medicinsk og kardiologisk opfølgning kan reducere 1-års mortaliteten efter elektiv kirurgi for KRC hos patienter med kardiopulmonale risikofaktorer ved at sikre, at postoperative medicinske problemer opdages og håndteres adækvat. Desuden ønskede vi brugbare estimater af mortaliteten i denne gruppe.

Metode
Patienter til elektiv kirurgi for KRC blev præoperativt screenet for kardiopulmonal komorbiditet, og i påkommende fald baselinevurderet i kardiologisk og/eller lungemedicinsk regi. Postoperativt blev de randomiseret til hhv. standardforløb eller interventionsforløb, d.v.s. planlagt medicinsk tilsyn på 4. postoperative dag og planlagt ambulant kardiologisk og lungemedicinsk opfølgning 1 og 3 mdr. postoperativt. Primære resultatmål var 1-års mortalitet, sekundære resultatmål korttidsmortalitet, liggetid, komplikationer og genindlæggelser.

Resultater
672 blev screenet og 326 (48 %) opfyldte inklusionskriterierne. Heraf afslog 108. I alt blev 202 inkluderet, 198 randomiseret, og 196 var evaluerbare. Præoperativt fandtes uerkendt sygdom og/eller behov for intervention hos 20-29 %. Postoperativt fandtes medicinske problemstillinger og/eller interventionsbehov hos 15-23 % i interventionsgruppen. Men ingen i de to grupper døde inden for 90 dage, og efter 1 år var kun 5 af dem døde (2.6 %), uden forskel mellem grupperne. Liggetid og komplikationsrater var ikke forskellige, men med tendens til færre genindlæggelser i interventionsgruppen.

Konklusion
1-årsmortaliteten efter elektiv KRC-kirurgi er nu om dage lav, selv hos patienter med kardiopulmonale risikofaktorer. Interventionsstudier må anbefales at fokusere på andre outcomes såsom komplikationer og genindlæggelser, som stadig er meget hyppigt forekommende.

F3

ICG fluorescerende angiografi ved rectosigmoidal resektion.

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Baggrund:

Anastomoselækage (AL) er den mest alvorlige komplikation til rectosigmoidal resektion med en incidens op til 20% når subkliniske lækager inddrages. Patogensen er multifaktoriel, men blodforsyningen til anastomosen spiller nok den mest afgørende rolle. Problemet er, at vurderingen af blodforsyningen traditionelt udelukkende baseres på en subjektiv vurdering.

Intravenøst administreret farvestof, Indocyanine grøn (ICG), kan visualisere blodforsyningen til tarmen vha. af infrarødt lys. Aktuelt vurderes ICG fluorescens visuelt af kirurgen, men der er brug for at undersøge om kvantitative pixel-analyser er mere præcise.

Formål:

Primære formål er at vurdere, hvorvidt vi kan standardisere metoden med ICG angiografi med hensyn til dosering og tidspunkt for peroperative aflæsning i forhold til tid efter injektionen.

Sekundære formål er at sammenligne kirurgens vurdering af blodforsyningen i forhold til den kvantitative pixel-analyse.

Metode:

Multicenter pilotstudie med intenderet inklusion på 10-20 patienter fra hver afdeling. Inden anastomosen tildannes infunderes ICG. Opladning i tarmen vurderes med hensyn til ICG synlighed, intensitet og udvaskning. Kirurgen vurderer herefter om der skal foretages re-resektion. Sideløbende med ICG undersøgelsen optages digital video til senere kvantitativ pixel-analyse.

Resultater og konklusion:

I alt 38 patienter er inkluderet. I forbindelse med den kvantitative pixelanalyse, har vi erfaret, at især afstand fra kamera til tarm har betydning. Kort afstand medfører dårlig billedkvalitet til pixelanalyse, for lang afstand resulterer i dårlig visualisering af perfusionen. Genskær kan vanskeliggøre placering af fokuspunkt og dermed umuliggøre den kvantitative analyse. Der har ikke været nogen utilsigtede hændelser i forbindelse med projektet.

Præliminære resultater vil blive præsenteret på årsmødet.

F4

Lav incidens af koloncancer ved koloskopi efter akut divertikulit

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Baggrund: Prævalensen af divertikulitis er stigende, særligt i industrialiserede lande. I Danmark er incidensen for hospitalsindlæggelse for akut divertikulitis 71/100.000. Patienter indlagt med akut divertikulit tilbydes koloskopi efter indlæggelse mhp. at udelukke koloncancer. Derfor ønskede incidensen af koloncancer opgjort hos patienter indlagt med førstegangstilfælde af akut divertikulit, og efterfølgende CT scanning samt koloskopi.
Metode: I perioden 2010-2017 er alle patienter indlagt med en divertikulit eller divertikulose kode opgjort. Patienter med tidligere divertikulit, ingen CT scanning eller manglende opfølgende koloskopi er ekskluderet.
Resultater: 335 patienter inkluderet. Heraf havde 4 patienter koloncancer ved koloskopi sv.t 1,2 %. Ved CT var der mistanke om tumor i to tilfældee, hvoraf en havde kompliceret divertikulit (Hinchey 1). Hos de øvrige to patienter havde én b-symptomer og abdominalsmerter gennem måneder. Den sidste patient havde kompliceret divertikulit (hinchey 1).
Konklusion: vi fandt meget lav incidens af koloncancer efter førstegangstilfælde af divertikulit. Koloncancer blev udelukkende diagnosticeret ved kompliceret divertikulit eller mistanke om cancer inden koloskopi. Der synes ikke at være overbevisende evidens for koloskopi efter akut ukompliceret divertikulit.

F5

Minimal Open Haemorrhoidectomy versus Transanal Haemorrhoidal Dearterilization: Effekt på syptomer. Et åbent randomiseret kontrolleret studie.

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Baggrund:
Hæmoridektomi er operationsmetoden for hæmorider med den laveste recidivrate, men har været forbundet med postoperative smerter og risiko for påvirkning af anal kontinens. Transanal Haemorrhoidal Dearterialization (THD) er introduceret som en alternativ og mindre invasiv metode. Der mangler imidlertid evidens for langtidseffekten af THD sammenlignet med hæmoridektomi. Tilgængelige randomiserede kontrollerede studier (RCTs) har undersøgt korttidseffekter med postoperative smerter som det primære effektmål. Formålet med dette studiet var at undersøge og sammenligne langtidseffekten på symptomer efter hæmoridektomi og THD.

Metode:
Enkelt-center åben RCT. Patienter med symptomgivende hæmorider grad III-IV (Goligher's klassifikation), eller grad II med blødning efter behandling med elastikker eller skleroterapi blev randomiseret til hæmoridektomi eller THD. Det primære effektmål var symptomer 12 måneder efter operation målt ved Haemorrhoidal Disease Symptom Score 0-20 (HDSS). Sekundære endemål var livskvalitet, patienttilfredshed, recidiv, postoperative smerter og rekonvalescens, anal kontinens, komplikationer og hospitalsomkostninger. Hæmoridektomi blev udført som Minimal Open Haemorrhoidectomy (MOH), med minimal excision af perianal hud og hæmoride, og brug af diatermi til dissektion og hæmostase.

Resultater:
48 patienter fik foretaget MOH og 50 patienter THD. Efter 12 måneder var data for det primære effektmål tilgængelige hos 45 (MOH) og 46 (THD) patienter. Vi fandt ingen forskel i symptomscore. Median HDSS (range) var 3 (0-17) efter MOH og 5 (0-17) efter THD (p=0,15). MOH gav bedre korrektion af den anale anatomi (p<0.001). Flere patienter rapporterede fortsat symptomer på prolaps efter THD (p=0.008). 7 patienter måtte behandles for recidiv efter THD vs. 0 patienter efter MOH (p=0,013). Patienttilfredsheden var højere efter MOH (p=0,049).
Der var ingen forskel i påvirkning af livskvalitet, postoperative smerte (gennemsnitlig og værste), rekonvalescens, anal kontinens eller antal postoperative komplikationer (p>0.05). THD havde højere hospitalsomkostninger (median forskel [CI95%] = DKK 4.136 [3.517-5.164], p<0,001).

Konklusion:
Symptomscore 12 måneder efter MOH og THD var sammenlignelige. MOH havde bedre effekt på hæmoridal prolaps og flere patienter fik behandling for recidiv efter THD. MOH gav højere patienttilfredshed sammenlignet med THD. MOH har postoperativt forløb, smerter og rekonvalescens sammenlignelig med THD.

F6

Long-term sexual dysfunction and risk factors for sexual dysfunction in disease free female colorectal cancer patients

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Background

Female sexual dysfunction (FSD) after treatment for rectal cancer is progressively addressed in the literature, however most studies include a very limited number of patients. FSD has been under prioritized compared to male sexual dysfunction although it is well recognised, that FSD negatively impacts quality of life.

The aim of this study was to investigate and compare female rectal cancer patients regarding different hypothesised risk factors for FSD. Also, to compare patients after rectal and colon resection imagining that rectal resected patients fare worse than colon patients.

Method

This study was part of a large cross sectional population based study.

The Danish Colorectal Cancer Group registry identified all patients treated for colon and rectum cancer between 2001-2014. Female patients were invited to answer the validated Sexual Vaginal Changes questionnaire (SVQ). Patients who declared they were sexually active at time of diagnosis were included. Associations between various items of sexual dysfunction and treatment-related factors were assessed by logistic regression analyses.

Results

9855 female patients were eligible. 6234 accepted participation, whereof 896 were sexually inactive before diagnosis and hence excluded, leaving 2259 for analysis (response rate 42%). 37% rectal cancer and 63% colon cancer with median follow up of 5.9 and 5.5 years.

Stoma presence showed a higher adjusted OR for dyspareunia (OR=2.12 (1.22-3.68)), reduced vaginal dimension (OR=2.69 (1.54-4.70)) and overall sexual dysfunction (OR=2.12 (1.24-3.61) compared to non-stoma patients. Radiotherapy compared to no radiotherapy showed an increased OR ratio for dyspareunia (OR=2.25 (1.22-4.13)) and overall sexual dysfunction (OR=2.04 (1.13-3.71).

Lastly, comparing rectal resection to colon resection, taking account for stoma presence and radiotherapy, no difference in sexual function were found, except for a small increased OR for sexual inactivity (OR=1.27 (1.0-1.62) in the rectal group.

Conclusion

This study implies two major risk factors for FSD in sexually active female rectal cancer patients, being radiotherapy and stoma presence. It also indicates, that maybe pelvic rectal surgery alone is not so damaging on female sexual function as believed. We need to address this matter with the patient – especially if the treatment involves radiotherapy or a permanent stoma.

F7

Postopereative komplikationer efter elektiv kolorektal cancer kirurgi: udvikling og validering af en prædiktionsmodel.

Forfattere

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Baggrund

Efter elektiv kolorektal cancer kirurgi får omkring 12% alvorlige komplikationer indenfor 30 dage. Komplikationer medfører forlænget hospitalisering, risiko for udskydelse af adjuverende kemoterapi og øget risiko for recidiv. Såfremt patienter med høj risiko for komplikationer kan identificeres inden operationen, vil det give mulighed for individualiseret behandling både før, under og efter operationen. Formålet med dette studie er at udvikle og validere en prædiktionsmodel for postoperative komplikationer efter elektiv kolorektal cancer kirurgi.

Metode

Patienter opereret elektivt for stadie I-III kolorektal cancer i perioden januar 2014-december 2016 og registreret i Danish Colorectal Cancer Group (DCCG.dk) databasen indgik i studiet Vi udviklede modellen baseret på patienter opereret i perioden 1. januar 2014 til 30. juni 2016. Patienter, der blev opereret mellem 1. juli 2016 til 31. december 2016 udgjorde valideringskohorten. Følgende variable blev udvalgt som mulige variable til modellen: køn, alder, performance status, rygning alkohol, BMI, UICC stadium, planlagt kirurgisk procedure, planlagt stomi, kirurgisk adgang, diagnose påvist ved screening, præoperativ kemo- eller stråleterapi. Målet var at estimere risiko for komplikationer klassificeret ved Clavien-Dindo ≥3b. Variablene blev udvalgt ved backwards selection og missing værdier håndteret med multipel imputation. Diskrimination vil blive evalueret med arealet under en ROC-kurve, diskrimination med en diskriminationskurve og nøjagtighed med R^2 test.

Resultater

I alt 7968 patienter med en komplikationsrate på 12% (Clavien-Dindo ≥3b) blev inkluderet til udviklingen af prædiktionsmodellen. I validering af modellen indgik 1498 patienter med en komplikationsrate på 13%. Resultater for modellens performance forventes klar i september.

Konklusion

Endnu ikke klar.

F8

Personer med kort uddannelse, lav indkomst og enlige har øget risiko for død et år efter akut kolorektal cancer kirurgi, en nationalt kohorteundersøgelse.

Forfattere

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Baggrund

Akut kolorektal cancer kirurgi er forbundet med høj mortalitet. Formålet med studiet var at undersøge associationen mellem socioøkonomisk position og akut kirurgi for kolorektal cancer samt associationen mellem socioøkonomisk position og 1-års dødeligheden efter akut kolorektal cancer kirurgi.

Metode

Patienter opereret for kolorektal cancer og registreret i Danish Colorectal Cancer Group (DCCG.dk) database fra 2007 til 2015 blev inkluderet. Data omkring akut aflastende stomi eller stent blev hentet fra Landspatientregistret. Socioøkonomisk position blev målt ved højest opnåede uddannelse, indkomst, geografi og samlever status. Risiko for akut kirurgi blev analyseret med logistisk regression og risiko for 1-års mortalitet blev analyseret ved en Cox regressionsanalyse.

Resultater

I alt 35.661 patienter blev inkluderet i studiet, hvoraf 15% blev opereret akut. Patienter med kort og mellemlang uddannelse, som var under 65 år, havde en øget risiko for akut kirurgi (henholdsvis OR = 1.58, 95% CI: 1.32-1.91 og OR = 1.34, 95% CI: 1.15-1.55). Patienter med lav indkomst (OR = 1.12, 95% CI: 1.01-1.24) og enlige (OR = 1.35, 95% CI: 1.26-1.46) havde ligeledes en øget risiko for akut kirurgi. 1-års overlevelsen efter akut kirurgi var 41%. Kort uddannelse (HR = 1.18, 95% CI: 1.03-1.36), lav indkomst (HR = 1.16, 95% CI: 1.01-1.34) og det at bo alene (HR = 1.25, 95% CI: 1.13-1.38), var alle associeret med øget risiko for død inden for 1 år efter akut kolorektal cancer kirurgi.

Konklusion

Patienter med lav socioøkonomisk position har en øget risiko for at blive opereret akut for kolorektal cancer og efterfølgende for at dø inden for det første år efter operation. Der er behov for øget viden omkring denne højrisiko patientgruppe både med henblik på en forebyggende indsats, men også relateret til behandlingen og i opfølgningen efter akut kolorektal cancer kirurgi.

F9

No association between day of week of operation and postoperative mortality and complications after elective surgery for colorectal cancer. A population based study in Denmark.

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Background: Recent studies have reported an association between the day of week of surgery and postoperative mortality meaning that patients undergoing surgery at the end of the week or during weekends may be at higher risk. The aim of this study was to investigate the influence of the day of week of surgery on mortality and morbidity rates in a national Danish cohort of patients undergoing major elective surgery for colorectal cancer.

Methods: In a register based study design, all patients undergoing elective major surgery for colorectal cancer in Denmark during a 10-year period (2005-2014) were studied. Patients were identified in the national colorectal cancer database. Association between short-time mortality and morbidity rates within 30 days after operation and the day of week of surgery, as well as patient characteristics, treatment data and socioeconomic data were analysed.

Results: We were not able to show that the day of week had a significant impact on short time mortality, nor on surgical or medical complications. There was no evidence that patients undergoing surgery on Fridays had more risk factors or were more socioeconomically deprived compared with patients undergoing surgery on Mondays to Thursdays.

Conclusion: The day of week of operation could not be shown to have any significant impact on the risk of postoperative surgical or medical complications, nor short-time mortality, in patients undergoing elective surgery for colorectal cancer in Denmark.

F10

Quality of Life after surgery for rectal cancer: a comparison of functional outcomes after transanal and laparoscopic approaches

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Background The aim in rectal cancer surgery is to cure with minimal impact on the quality of life. Transanal total mesorectal excision (TaTME) seems to be a safe and feasible alternative to Laparoscopic TME (LaTME). However, limited data are available on the functional outcomes after TaTME. We aimed to study the quality of life (QoL), through questionnaires, comparing different functional outcomes after TaTME and LaTME.

Methods Consecutive patients who underwent TME between 2010 and 2017 at Slagelse Hospital, Denmark were included based on certain criteria. Patients were divided according to the surgical technique (TaTME vs LaTME). The study was based on telephone interviews using the questionnaires: EORTC-QLQ C30, EORTC-QLQ C29, Low Anterior Resection Syndrome score (LARS) and International Prostate Symptom Score (IPSS) for male patients. Patients in this study had a follow-up time of at least eight months.

Results

Overall global health status was similar between the groups (p=0.625). Anorectal symptoms were significantly in disfavor of TaTME included buttock pain (p=0.011), diarrhea (p=0.009), clustering of stools (p=0.017) and urgency (p=0.032), yet total LARS score was comparable (p=0.054). We found comparable sexual results and an overall higher satisfaction with urinary status in TaTME group (p=0.010), yet no difference in IPSS symptoms (p=0.236).

Conclusions

Anorectal dysfunction may occur after Total Mesorectal Excision (TME) regardless of surgical technique, frequently more in after TaTME. The LARS symptoms and the overall quality of life status were, however comparable. TaTME had a positive impact on the reported QoL, related to urinary symptoms.

Keywords Rectal cancer, TaTME, LaTME, quality of life, surgery, functional results

F11

The need for individual colonoscopist performance tracking - Differences in key performance indicators among high volume endoscopists

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Background

Screening colonoscopies are tracked by key performance indicators on endoscopy unit level. Despite acceptable results on endoscopy unit level, individual colonoscopist's performance might vary. Subpar performance colonoscopists could result in increased costs, complications and missed lesions. From a patient perspective, a risk of getting a subpar colonoscopy is unacceptable.

Method

Data on all colonoscopies performed at the surgical gastroenterology department, Aalborg University Hospital (outpatient clinique) were collected during a seven week period. Data included: colonoscopist's background, type of colonoscopy (screening vs non-screening), cecum intubation (and reason for not reaching the cecum), Polyp Detection Rate (PDR), sedation and nurse reported patient pain. The patient's perspective was evaluated using a short six-question questionnaire with an analog response scale from 0-100.

Results

A total of 894 colonoscopies were performed by 32 different colonoscopists. Six colonoscopists (designated colonoscopist A to F) were high volume colonoscopists (>50 colonoscopies), which made it possible to perform further statistical analysis. Colonoscopist A to F performed a total of 530 colonoscopies (range 62-123). Among high volume colonoscopist cecum intubation rate (CIR) varied from 74% to 96% and PDR varied from 18% to 44%.

Logistic regression was performed to account for any difference in casemix among colonoscopists. The odds ratio (OR) for not reaching the cecum were significantly (95% CI) higher among colonoscopist A 7.28 (2.0-26.1) and B 4.4 (1.2-16.3). The OR for finding polyps were significantly higher among colonoscopist D 3.0 (1.4-6.6) and F 3.0 (1.4-6.3).

Patient reported pain was significantly worse when colonoscopies were performed by colonoscopist B than C or D (p= 0.01 and p=0.04) (One-way ANOVA).

Conclusion

CIR, ADR and patient reported pain were significantly different among colonoscopists within the same endoscopy unit. Continuous performance tracking could identify colonoscopists with a need of further training to improve performance. Performance tracking could be achieved by a module (commonly named SFI: Sundhedsfagligt indhold *red.*) within the electronic patient journal. We aim to implement a SFI by 2019, which gives periodically feedback to colonoscopists and endoscopy unit management.

F12

Detection of early anastomotic leakage by intraperitoneal microdialysis after low anterior resection for rectal cancer - a prospective two center study

Authors

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Background

Anastomotic leakage (AL) after rectal cancer surgery is a serious complication with a reported mortality up to 18%. The rate of AL varies greatly from 1 to 24 % in most publications, irrespective of the creation of a diverting stoma. The microdialysis (MD) technique provides a dynamic view of biochemical changes in the extracellular space in a small well-defined anatomic region including intestinal anastomosis.

The objective was to compare peritoneal MD with a clinical scoring system (den Dulk score) with respect to their ability to predict the development of AL prior to the occurrence of overt clinical symptoms in patients undergoing low anterior resection for rectal cancer.

Method

A microdialysis catheter was anchored near the anastomosis. Samples were analysed (lactate, pyruvate, glucose and glycerol) every fourth hour. The results were blinded for the caregivers and surgeons. A clinical Leak score was performed ones daily and a CT with contrast enema was performed on postoperative day 7.

Results

One hundred and sixty-two eligible patients were included, and 129 patients were used in the final analysis. Thirty-five (27%) patients had AL (Grad A:11, B:12, C:12). Area under the curve for intraperitoneal lactate was significantly higher in the patients with AL 143 (CI: 104-182) compared to the no leak group 69 (CI: 56-82) ($p<0.01$). ROC analysis demonstrated that a 6.2 mmol/l increase in lactate had a 67 % (CI: 47-83) sensitivity, 90 % (CI: 82- 95%) specificity, accuracy of 81 %(CI: 77-90), positive predictive value 69 % (CI: 50-85) and negative predictive value 86 % (CI: 77-92) for AL. A clinical score ≥ 4 had a 57 % (CI: 37-75%) sensitivity, 79 % (69-87) specificity and accuracy of 71 % (CI:62-78), positive predictive value 46 % (CI: 30-63) and negative predictive value 82 % (CI: 73-90).

C**onclusion**

Increased intraperitoneal lactate was significantly associated with early AL and with higher sensitivity, specificity, accuracy and predictive values and earlier detection then a clinical AL score.

F13

Risikoen for recidiv efter komplet mesokolisk resektion (CME) for sigmoideumcancer

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Baggrund:
Det er tidligere vist, at complete mesocolic excision (CME) for UICC stadium I-III colon cancer er associeret med nedsat risiko for recidiv. Det er uklart om dette gælder for tumorer i alle segmenter af colon fx for colon sigmoideum.

Metode:
Retrospektivt populationsbaseret studie af patienter, der gennemgik elektiv resektion i Region Hovedstaden i perioden juni 2008-2014 for adenocarcinom UICC stadium I-III i colon sigmoideum. Alle CME resektionerne blev udført Nordsjællands Hospital Hillerød, hvor CME var standard procedure, mens de konventionelle resektioner (non-CME) blev udført på de tre andre hospitaler med kolorektalkirurgisk funktion.

Resultater:
920 patienter med sigmoideum cancer blev inkluderet. 249 i CME gruppen og 671 i non-CME gruppen. Risikoen for recidiv inden for 5 år var 26,2% (95% CI 21,3-31,1%) i non-CME gruppen og 16,7% (95% CI 11,6-21,8) i CME gruppen (Log-rank test p = 0,034).
For henholdvis non-CME og CME var risikoen for recidiv ved UICC stadium I 10,5% (0 – 17,5%) vs 0% (p = 0,020), ved UICC stadium II 25,5% (17,6 – 33,2%) vs 14,4 (6,3-22,5%) (p=0,128) og ved UICC stadium III 38% (28,7-47,4) vs 29,1% (19,41-38,86%) (p=0,333).
Den justerede hazard ratio for recidiv efter CME var for hele populationen 0,65 (0,45-0,96) (Wald test p=0,030).

Konklusion:
CME resektion for sigmoideumcancer uden spredning til lymfeknuderne ser ud til at være associeret med en lavere risiko for recidiv, mens der for stadium III ikke synes at være nogen signifikant forskel i risikoen.

F14

Onkologiske langtidsresultater efter complete mesocolic excision (CME) for højresidig UICC stadium I-III colon cancer

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Baggrund:
Der er tidligere påvist en association mellem CME og bedre onkologiske resultater. For især højresidig CME er lymfekundedissektionen mere omfattende end ved konventionel kolonresektion. Vi ønsker med dette studie at præsentere resultater baseret på en dansk population.

Metode:
Populationsbaseret studie af patienter, der gennemgik elektiv operation for højresidigt adenocarcinom i Region Hovedstaden i perioden juni 2008-2014. CME var i hele perioden standardprocedure på kirurgisk afdeling på Nordsjællands Hospital Hillerød. Patienter fra Hillerød udgør CME-gruppen, mens kontrolgruppen udgøres af patienter opereret med konventionel kolonresektion på de tre andre afdelinger med kolorektalkirurgisk funktion.

Resultater:
Non-CME gruppen bestod af 813 patienter og CME gruppen af 256. De to grupper var ikke signifikant forskellige med hensyn til demografiske variable og andelen af patienter, der fik adjuverende kemoterapi. Andelen af laparoskopiske resektioner var for non-CME gruppen 64.1% og for CME gruppen 33.6% (p = <0.001).
Risikoen for recidiv for UICC stadium I-III var i de første fem år efter operationen 25,4% (95% CI 21,4-29,3%) i non-CME gruppen og 11,6% (95% CI 7,3-15,9%) i CME gruppen (Log-rank test p=0,0001).
Stratificeret for stadium var risikoen for recidiv i henholdsvis non-CME og CME gruppen for stadium I 10,1% (3,2-16,9%) og 0% (p=0,105), for stadium II 17,1% (12,3-22,0%) og 4,3% (0-8,0%) (p=0,0017), og for stadium III 41,1% (34,0-48,2) og 26,5% (16,4-36,6%) (p=0,032).
Justeret hazard ratio (HR) for recidiv efter CME var for hele populationen 0,48 (5% CI 0,31-0,73) (Wald test p=0,030). For stadium II og III var HR henholdsvis 0,28 (0,11-0,71; p=0,0075) og 0,53 (0,32-0,88; p=0,015).

Konklusion:
CME synes at være associeret med en lavere risiko for recidiv for alle stadier.

F15

Langtidsopfølgning på (ende)tarms funktion hos rektumcancer patienter behandlet udelukkende med strålebehandling og endorectal brachyterapi (watchful waiting cohorde).

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Baggrund: At rapportere anorektal funktion hos langtidsoverlevende rektumcancer patienter i watchful waiting (WW) sammenlignet med køn og aldersmatchede, raske frivillige (HV) forsøgsdeltageres funktion. Alle patienter havde lav (< 6 cm fra ydre anale åbning) T2-3a, N0-1,M0 adenocarcinom, og blev udelukkende behandlet onkologisk i.f.a. 60 Gy mod tumor samt 50 Gy mod lymfeknuder (i 30 fraktioner) samt 5 Gy endorektal brachyterapi kombineret med 300 mg/m^2 UFT.
Metode: Anal manometri og rektal opfyldningstest blev udført i 13 WW (12 mænd, 68,6 (63-70) år gammel) (tid siden diagnose 2,8 (2,5-3,9) år) og 15 HV (14 mænd, alder 64,4 (58-71) år). LARS og Wexner fecal inkontinens score vurderede funktionelle resultater.
Resultater: WW havde lavere analt hviletryk (mean± SD) 57 ± 21 mod 83 ± 22 cmH2O (P = 0,007= og analt knib 162 ± 74 mod 239 ± 58 cmH2O (P = 0,008) sammenlignet med HV. Rectal sensibilitet målt ved opfyldning gav ingen forskel imellem grupperne ved `første afførings følelse´ 74 ± 35 mod 86 ± 40 ml, P = 0,4 , eller ´afførings trang´ 111± 44 mod 138 ± 67 ml, P = 0,2. Maksimalt tolerabelt volumen var signifikant lavere i WW end i HV 180 ± 113 mod 244 ± 102 ml, P = 0,016. LARS score var 29 ± 4 i WW mod 7 ± 8 i HV (p <0,001); forskellen beror mest på 2 af 5 spørgeskema items: afføringstrang og fraktioneret afføring som begge var højsignifikant værre i WW end i HV. Vi fandt ingen forskel i wexner score.
Konklusion: Radioterapi kombineret med endorektal brachyterapi mod lave rektumcancer forårsager anorektale dysfuntion grundet rektal overfølsomhed og reduceret anal sphincter tryk.

F16

Validering af Dansk Kolorektal Cancer Database – på vegne af Danish Colorectal Cancer Group's (DCCG) Videnskabelige Udvalg

Forfatterliste

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Introduktion

Danish Colorectal Cancer Group (DCCG.dk) grundlagde i 2001 en landsdækkende database, hvori alle patienter med tyk- og endetarmskræft i Danmark bliver registreret. Der registreres detaljer om diagnosticering, omfang af sygdom, behandling, komplikationer og resultater af behandlingen. Databasen er en klinisk kvalitetsdatabase med en patientkomplethed >99% og siden 2001 er der produceret årsrapporter med fokus på behandlingsresultaterne. Disse rapporter, samt videnskabelige studier baseret på databasens data, har bidraget betydeligt til at forbedre behandlingen af tyk- og endetarmskræft. Kvalitetsdatabasens vigtighed er således indiskutabel. Dette til trods er datakompletheden kun blevet valideret en enkelt gang, omfattende udvalgte data for 87 patienter fra 2001. Dette projekt har til formål at evaluere DCCG databasens datakomplethed og -kvalitet.

Materialer & Metoder

Da det ikke har været muligt at opnå tilladelse til gennemgang af journaler fra hele databasens levetid valideres i første omgang data fra årene 2014-2017. Fra disse år udvælges en stikprøve på 5% sv.t. 1.000 patientforløb, og kernevariable fra databasen genregistreres herefter af specialiserede kolorektalkirurger på de enkelte afdelinger. Data registreres i sikret database online (REDCap). De udvalgte variables komplethed og nøjagtighed vil blive vurderet bl.a. ved udregning af kappa-værdier som proportionen mellem den aktuelle overensstemmelse ud over den tilfældige og den potentielle overensstemmelse ud over den tilfældige.

Resultater

I skrivende stund pågår indtastningen af de udvalgte kernevariable. Aktuelt er 390 patientforløb færdigregistrerede. Endelige resultater ventes at kunne præsenteres i løbet af sommeren 2018.

Konklusioner

Denne validering forventes at blive af stor betydning for gennemslagskraften af fremtidige forskningsprojekter baseret på databasen, ligesom det er håbet, at projektet kan inspirere andre nationale kliniske kræftdatabaser til gennemgang og validering af data.

F17

Completion TME following TEM in patients with rectal cancer: short and long-term outcomes in comparison with primary TME

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Background: Total mesorectal excision (TME) remains the gold standard in the treatment of patients with rectal cancer. As an alternative, transanal endoscopic microsurgery (TEM) represents a surgical option in the treatment in selected patients with early rectal cancer, and when there is discrepancy between radiological, clinical and biopsy findings. If the histological examination of the resected TEM specimen shows signs of high-risk features, the risk of recurrent disease is significantly higher, and survival outcome inferior to primary TME (pTME). In such patients, completion TME (cTME) is recommended. However, there are concerns with cTME, primarily regarding risk of higher perforation rates, poor resection quality, and higher rates of abdominoperineal resection (APR).
The aim of this study was to compare short-term and long-term results between patients with cTME and pTME.
Methods: Nationwide data collected from Danish Colorectal Cancer Group (DCCG) database on all patients with cTME between 2005 and 2015. Patients with cTME were compared with patients with pTME from the database after propensity score matching (matching ratio 1:2). Matching variables were age, gender, ASA score, T-stage, and tumor distance from anal verge. Survival rates were calculated with Cox proportional hazard model.
Results: A total of 60 patients with cTME and 180 patients with pTME were included. The mean time from TEM to cTME was 39 days (range 14 – 90). There was no difference between cTME and pTME regarding peroperative tumor perforation (5% vs. 2.5%, p=0.402), conversion to open surgery (11.1% vs. 8.5%, p=0.703) or 30-day morbidity (32.1% vs. 34%, p=0.858). The rate of APR was slightly higher in the cTME group, but the difference was insignificant (28.3% vs. 16.7%, p=0.08). Multivariate analysis revealed that patients with previous TEM had a lower risk of APR (OR (95%CI): 0.358 (0.13-0.93), p=0.038). Furthermore, previous TEM was not an independent predictor of incomplete mesorectum (Grade III) (p=0.487). There was no difference in rate of local recurrence between cTME and pTME (5.2% vs. 4.3%, p=1). After a mean follow-up time of 6 years, there was no difference in overall survival between groups (p=0.08).
Conclusion: This nationwide study showed no significant differences in short- or long-term outcomes between cTME and pTME in patients with rectal cancer. It therefore seems safe to choose TEM as a primary treatment in selected patients.

F18

Anesthetic technique, risk of recurrence and mortality after colorectal cancer surgery in an Enhanced Recovery After Surgery (ERAS) setting.

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Introduction:

Previous studies indicate that inhalational anaesthetic agents (INHA) might have an adverse effect on the immune system and thereby promote growth of residual cancer cells(1,2). We aimed to compare cancer recurrence rates, and secondarily mortality in patients undergoing surgery for CRC anesthetised with INHA or total intravenous anesthesia (TIVA) respectively. All patients were treated at the same hospital and followed a standardized ERAS protocol. We hypothesized that recurrence and mortality is higher in patients anesthetised with INHA.

Methods:

We identified patients operated with curative intent for CRC at Zealand University Hospital from April 2013 to May 2015. Data on demography, comorbidity, complications, anesthesia, recurrence and death until 27th of November 2017 were collected.

Patients were stratified according to the anesthetic technique. Primary outcome was disease-free survival and all-cause mortality.

Results:

The INHA group had higher American Society of Anesthesiologists (ASA) score ($p<0.005$), WHO performance score ($p<0.005$), higher rate of concomitant cancer (25% vs 13%, $p=0.036$). There was a significantly higher mortality rate in the INHA group (HR 2.1, $p=0.009$), but no statistically significant difference was seen in disease-free survival (HR 1.25, $p=0.41$).

Conclusion:

Volatile anesthesia was associated with higher mortality but not worse disease-free survival after CRC surgery in an ERAS setting.

1. Hiller JG, et al. Perioperative events influence cancer recurrence risk after surgery. *Nat Rev Clin Oncol*. 2018.
2. Wigmore TJ, et al. Long-term Survival for Patients Undergoing Volatile versus IV Anesthesia for Cancer Surgery. A Retrospective Analysis. *Anesthesiology*. 2016;124(1):69-79.

F19

Effect of fixation devices on postoperative pain after laparoscopic ventral hernia repair: a randomized clinical trial of permanent tacks, absorbable tacks, and synthetic glue

Authors
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BACKGROUND:
The method of anchoring the mesh in laparoscopic ventral hernia repair is claimed to cause postoperative pain, affecting the quality of life of the patients. The aim of this randomized study was to compare the effect of three types of fixation devices on postoperative pain, patient reported quality of life, and hernia recurrence.
METHODS:
Patients with ventral hernias between 2 and 7 cm were randomized into one of three mesh fixation groups: permanent tacks (Protack™), absorbable tacks (Securestrap™), and absorbable synthetic glue (Glubran™). The primary endpoint was pain on the second postoperative day, measured on a visual analogue scale. Quality of life and recurrence rate were secondary endpoints and investigated through questionnaires and clinical examination at follow-up visits 1, 6, and 12 months after surgery.
RESULTS:
Seventy-five non-consecutive patients were included in the study, with 25 patients in each group. There was no significant difference between groups for unspecified pain on the second postoperative day ($p = 0.250$). The DoloTest™ values were 55.3 ± 28.9 mm, 43.5 ± 28.5 mm, and 55.9 ± 26.3 mm for permanent tacks, absorbable tacks, and synthetic glue, respectively. No differences were observed between groups with respect to quality of life of the patients and hernia recurrence rate.
CONCLUSIONS:
In conclusion, the present randomized trial in patients undergoing LVHR of small and medium-sized ventral hernias with a follow-up of 12 months did not show significant differences between permanent tacking (Protack™), absorbable tacking (Securestrap™) and glue fixation (Glubran™) of mesh with regard to pain as the primary end-point or in QoL or recurrence rate as secondary end-points.

F20

Prævalens og prædiktive faktorer for udvikling af kroniske mavesmerter efter operation med Roux-en-Y gastric bypass

Forfattere

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Baggrund

Postoperative mavesmerter er en hyppig komplikation efter operation med Roux-en-Y gastric bypass (RYGB). Op til 54% af patienterne klager over mavesmerter, hvilket fører til behov for billeddiagnostik i efterforløbet hos 50% af patienterne. Andre kirurgiske langtidskomplikationer er velundersøgte, men der er sparsom litteratur vedrørende patienterne med uforklarlige mavesmerter. Formålet med dette studie er at undersøge prævalensen og prædiktive faktorer for kroniske mavesmerter efter operation med RYGB.

Metode

Studiet er et registerbaseret kohortestudie med inklusion af alle patienter der har fået foretaget en RYGB operation mellem 2010 og 2015 på Sjællands Universitetshospital. Der er benyttet data fra Landspatientregisteret, Danmarks Statistik, Lægemiddeldatabasen, Dansk Fedmekirurgi Register, patientjournaler og et spørgeskema vedrørende mavesmerter. Kroniske mavesmerter er defineret ved forbrug af stærk smertestillende medicin, en diagnose med kroniske smerter eller henvisning til smerteklinik. Betydelige selv-rapporterede mavesmerter er defineret som mavesmerter mere end to gange ugentligt indenfor den sidste måned.

Resultater

Vi inkluderede 787 patienter i studiet. Median opfølgning var 63 måneder. Prævalensen af patienter med postoperative kroniske mavesmerter var 11%. Prævalensen af patienter med betydelige selv-rapporterede mavesmerter var 21%. Begge grupper var betydeligt påvirkede af mavesmerterne i deres dagligdag. Præoperativ forbrug af stærk smertestillende medicin var en prædiktor for udvikling af både postoperative kroniske mavesmerter og betydelige selv-rapporterede mavesmerter. Yderligere prædiktorer for betydelige selv-rapporterede mavesmerter var arbejdsløshed, tidlige postoperative komplikationer og rygning.

Konklusion

En ud af ti patienter der får foretaget en RYGB operation udvikler kroniske mavesmerter der kræver stærk smertestillende medicin, og en ud af fem patienter har mavesmerter mere end to gange om ugen. Prædiktive faktorer inkluderer præoperativt forbrug af stærk smertestillende medicin, arbejdsløshed, tidlige postoperative komplikationer og rygning.

F21

Chronic pain 12 years after laparoscopic transabdominal preperitoneal (TAPP) or Lichtenstein's repair for recurrent inguinal hernia. A single-blinded randomized clinical trial.

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Background: Chronic pain after primary and recurrent inguinal hernia repair may be associated with the repair technique per se. The primary aim in this randomized trial was to analyse chronic pain after laparoscopic transabdominal preperitoneal repair (TAPP) and Lichtenstein repair for a recurrent hernia. Secondary outcome was risk of re-recurrence.
Methods: National multi-centre single-blinded, randomized trial on TAPP vs Lichtenstein's repair in male patients operated for recurrent inguinal hernia after a primary open groin hernia repair. Prospective follow-up data was achieved by a structured questionnaire on pain-related functional impairment using the validated Activities Assessment Scale (AAS), pain related sleep disturbance, and sexual dysfunction. Operation for re-recurrence was registered in the Danish Hernia Database.
Results: A total of 360 patients were randomized and 265 patients responded to the mailed follow-up questionnaire (89%; TAPP n = 136 and Lichtenstein n = 129). The follow-up period was median 12 years after TAPP and Lichtenstein. Moderate or severe pain was reported by 6 (4%) vs 9 (7%) of patients, after TAPP and Lichtenstein, respectively (p = 0.698). Pain intensity (the higher score, the worse) was 8 (8 - 18) vs 8 (8 - 29) (p = 0.549). Three (2% TAPP) vs four (3% Lichtenstein) patients complained of weekly pain and 9 (10%) vs 12 (10%) complained of pain during sexual activity (p = 0.496). One (1% TAPP) vs 3 (2% Lichtenstein) patients complained of sleep disturbances (p = 0.593). The cumulative rate of operation for re-recurrence after 12 years was 9.9% vs 10.0% (p = 0.764).
Conclusion: Twelve years after repair for recurrence chronic pain was present in 4-7% and cumulated operation for re-recurrence was 10%, without differences between Lichtenstein and TAPP-repair.

F22

Safety and Feasibility of Preoperative Exercise Training during Neoadjuvant Treatment in Patients Undergoing Surgery for Adenocarcinoma of the Gastro-Esophageal Junction

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Background: First-line treatment for operable gastroesophageal junction (GEJ) cancer is a demanding course of neoadjuvant chemo- or chemo-radiotherapy before tumour resection, and strategies to improve treatment tolerability are warranted. We examined the safety and feasibility of preoperative exercise training during neoadjuvant treatment in patients with GEJ cancer.
Methods: Fifty patients were allocated to a standard of care control (CON)-group or an exercise (EX)-group prescribed standard of care and 2 weekly high-intensity aerobic exercise and resistance training sessions. Primary endpoint was incidence of serious adverse events (SAEs), precluding surgery; preoperative hospitalization; and postoperative complications. Also changes in patient-reported quality-of-life and pathological treatment response were recorded. In the EX-group, exercise-adherence and changes in aerobic fitness, muscle strength, and body composition were examined.
Results: The incidence of SAEs was not increased in the EX-group. Compared to the CON-group, risk of treatment failure was 5% vs 21% (Risk-Ratio 0.23 [0.04;1.19]), preoperative hospitalization-risk was 15% vs 38% (Risk-Ratio 0.39 [0.12;1.23]) and postoperative complication risk was 58% vs 57% (Risk-Ratio 1.06 [0.61;1.73]), respectively. The EX-group attended on average 17.5 sessions and improved fitness (+8%), muscle strength (between 15-22%) and FACT-E total score (+12-points) compared to baseline-level.
Conclusion: Preoperative exercise training was safe and feasible and led to favorable changes in fitness, strength and quality-of-life. Further, preoperative exercise training may be associated with lower risk of critical SAEs precluding surgery and hospitalization. Registration number NCT02722785.

F23

Gastrointestinal surgical hospital burden after laparoscopic gastric bypass for obesity. A nationwide long-term follow-up study.

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Background Little is known about the gastrointestinal surgical hospital burden after laparoscopic gastric bypass. The objective was to study long-term gastrointestinal surgical hospital admissions and gastrointestinal surgical procedures (hospital burden) after laparoscopic gastric bypass.
Methods Some 13,582 Danish patients undergoing laparoscopic gastric bypass were surveyed up to eight years with a 100% follow-up. A non-surgical group of 45,948 obese individuals served as reference. The outcomes were gastrointestinal surgical hospital admissions, gastrointestinal surgical procedure and mortality
Results The mean follow-up time was 4.7 years. Risk proportion for surgical hospital admission was 6.0% the first 30 days (95% confidence interval 5.66-6.47%) in the intervention group, and risk proportion of gastrointestinal surgical procedures after discharge was 1.5% during the first 30 days in the intervention group (1.3%-1.72%). The unadjusted surgical hospital admission rates for the first two years were 0.55 per person-year for the intervention group (0.52-0.58) and 0.57 per person-year (0.59-0.62) for the full follow-up period. The unadjusted incidence rate of abdominal operation was 0.11 per person-year (0.09-0.13) for the intervention group for the first two years. The incidence rate ratio (IRR) for surgical hospital admissions was 2.15 in the intervention group compared with the reference group (2.06-2.24). Patients operated on before 2010 had a higher IRR for surgical hospital admission than after and IRR for gastrointestinal surgical procedures was 6.56 (6.15-6.99) and the mortality odds ratio was 0.84 (0.65-0.96).

Conclusions The gastrointestinal surgical hospital burden was significantly higher the first eight years after gastric bypass and mortality slightly lower compared with non-surgical obese patients.

F24

ACHALASIA-DISEASE SPECIFIC QUALITY OF LIFE AND HEALTH RELATED QUAILITY OF LIFE AFTER LAPAROSCOPIC HELLER MYOTOMY:
LONGTERM DANISH RESULTS OF 207 PATIENTS

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Introduction

Achalasia is a rare benign chronic autoimmune motility disorder of the esophagus. A curative treatment restoring the motility disorder does not exist, however there are good options for symptom control by laparoscopic Heller myotomy (LHM). The aim of this study was to evaluate the effect of LHM in patients suffering from achalasia and to evaluate long term achalasia-disease specific quality of life (achalasia-DSQoL) as well as health related quality of life (HRQoL).

Material and Methods

A chart review was performed for all patients who underwent LHM from January 2009 to December 2015 at the Copenhagen University Hospital, Hvidovre. Preoperative and postoperative data were collected through a prospectively collected database. HRQoL scores were measured by the Short form (SF-12) questionnaire and achalasia-DSQoL score with the achalasia severity questionnaire (ASQ).

Results

Total of 207 patients underwent LHM. Operative morbidity was 2.9 %. There was no mortality related to the procedure. An inadequate response after LHM was found in 5.78 %. Recurrence of dysphagia was found in 25.12 % after median of 21 months (IQR= 19). The median follow-up time was 3.9 years (IQR 3,3). Satisfaction with the present condition after operation was 83.63 %. The mean improvement in ASQ score was 19.7 with a significant better achalasia-DSQoL as well as significant increase in HRQoL on the Mental health score. Correlation between ASQ score severity and decrease in general HRQoL was found on all domains.

Conclusion

LHM in our center is a procedure with no mortality, low morbidity and high patient satisfaction that increases HRQoL and achalasia-DSQoL significantly and quality of life after LHM is comparable with the normal and age matched healthy population after a follow up of 3.9 years.

F25

Radiofrekvens ablation af Barrets esophagus med svær dysplasi eller tidlig cancer på Odense Universitetshospital.

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Introduktion

Barretts esophagus (BE) defineres ved tilstedeværelse af cylinderepitel med intestinal metaplasi indeholdende bægerceller. Forekomsten af adenocarcinomer i distale esofagus er stigende og associeret med forekomsten af BE. BE klassificeres makroskopisk ved hjælp af Prag-klassifikationen og mikroskopisk skelnes mellem ikke-dysplastik, let og svær dysplastisk BE.
Internationale erfaringer med anvendelse af radiofrekvens ablation (RFA) til BE patienter med svær dysplasi/overfladisk cancer har vist lovende resultater.

Metode

RFA blev introdukseret i 2009 på OUH til behandling af BE. Resultaterne for patienter behandlet med svær dysplasi eller cancer i esophagus frem til februar 2018 er opgjort. Ved noduli eller cancer blev der foretaget endoskopisk mucosa resektion (EMR) forud for behandling. Endoskopisk ultralyd blev foretaget ved cancer for at evaluerer lymfeknude status og efterfølgende blev patienten diskuteret på MDT vedrørende behandlingsstrategi. BE segmenter større end 2 cm blev typisk behandlet med cirkulær RFA mindre segmenter eller øer med fokal RFA i to omgange med fjernelse af debris mellem procedurerne. Kontrolendoskopi med biopsi blev foretaget hver 3. måned det første år, hver 6. måned svarende til 2-3 år og herefter årligt. Alle patienter fik højdosis PPI.

Resultater

I alt 49 patienter (mænd n=42, gennemsnitsalder 69 år) blev inkluderet. Indikationen var svær dysplasi n=33 (67 %), overfladisk cancer n=14 (29 %), dybereliggende cancer n=2 (4 %). 80 % (39/49) af patienterne var ASA gruppe 2-3. 47 (23/49) % blev vurderet operable og hos 84 % (41/49) var intentionen kurativ. EMR blev udført i alt 30 gange på 22 patienter. De 2 patienter med dybere cancer blev ekskluderet da behandlingsmålet var lokal tumorkontrol. Der blev udført i alt 86 RFA behandlinger (Cirkulær, n=30. Fokal, n=56) svarende til 1,8 behandlinger pr patient. Hos 82 % af patienterne med svær dysplasi opnåede man eradikation af dysplasien, mens man eradikerede 86 % af de overfladiske cancere. Fem patienter med svær dysplasi progredierede heraf gennemgik 3 operativ og 2 onkologisk behandling. Status ved sidste/afsluttende kontrol var komplet eller partiel respons på 70 % hos patienter med svær dysplasi og 86 % hos patienter med overfladisk cancer. To patienter med cancer ønskede ikke follow up. Der blev ikke registreret alvorlige komplikationer til RFA behandlingen.

Konklusion

RFA behandling af BE med svær dysplasi eller overfladisk cancer kan udføres med relativ høj responsrate på udvalgte patienter uden betydende komplikationer.

F26

Quantitative perfusion assessment during gastrointestinal surgery using fluorescence-guided surgery

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Background:

Despite exhaustive research and improvement of surgical techniques, leakage rates after intestinal resection and anastomosis remain relatively stable. Anastomotic leakage (AL) is associated with increased morbidity, mortality, and risk of local recurrence of cancer. An important risk factor for AL is poor anastomotic perfusion, traditionally assessed by coloration of tissue, bleeding from resection lines, and palpation of the pulse in the mesentery. These methods have been proven insecure and with poor correlation to outcomes, and are inadequate in a minimally invasive environment. Fluorescence angiography (FA) with indocyanine green (ICG) is a novel and promising method. However, most surgeons only perform a visual subjective assessment of the FA, thereby risking observer bias. Thus, a validated reproducible quantification tool of FA is needed.

Methods:

A computer algorithm (Q-ICG) was developed to quantify the fluorescence that emits from the tissue of interest when injected indocyanine green (ICG) is excited by near-infrared light. To validate the Q-ICG measures during normal perfusion, microvascular flow measurement with neutron labeled microspheres was performed in seven pigs. In another seven pigs, who underwent segmental devascularization of small bowel loops and the stomach, Q-ICG was tested with local lactates as a reference. Finally, we investigated Q-ICG in improved perfusion in a double-blinded randomized trial of 19 pigs, who had small bowel resection and anastomosis. Pigs were randomized to receive glucagon-like peptide 2(GLP-2) or placebo, as GLP-2 is known to increase small bowel perfusion.

Results and conclusion:

When using the normalized slope of Q-ICG we found an extremely robust correlation to microvascular flow in normal gastric perfusion (r = 0.92-0.96, p = 0.001). Furthermore, in devascularized small intestines and stomach Q-ICG showed a strong correlation to local lactate values (Spearman rho = 0.8, $p < 0.001$). The blinded Q-ICG assessment found, that animals treated with GLP-2 exerted a higher increase in anastomotic perfusion compared to controls ($p<0.05$).

We developed an objective tool for quantitative perfusion assessment, that significantly distinguished between normal, attenuated, and improved perfusion. This tool may contribute to reducing the risk of AL by ensuring an optimal perfusion. Furthermore, this tool also enables investigation of risk factors and interventions that may reduce or improve anastomotic perfusion.

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ABSTRAKTER – Akutkirurgi, Traume og Hernie – Frie foredrag

F27:

TACHOSIL AS A SURGICAL AID IN PERFORATED ULCER REPAIR

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INTRODUCTION

Perforated peptic ulcer (PPU) is a serious complication to peptic ulcer decease (PUD). During the last decade the treatment of PPU has shifted from an open to a laparoscopic approach preferably covered with an omental patch. This approach is currently the recommended procedure by the Danish guidelines. Reperforation and leakage following repair is a serious and life-threatening complication that occurs in approximately 13% of cases.

A variety of animal studies imply that the topical application of TachoSil has a sealing effect and TachoSil may therefore aid in reducing the risk of perforation in handsewn and stapled enteric anastomosis. In addition, suture-free small bowel anastomosis in pigs has been reported to result in improved healing compared with a conventional hand-suturing technique. Preliminary data indicate that TachoSil application is safe with no adverse effects and that the application on the anastomosis may result in increased bursting pressure. Two case reports of patients with PPU where the perforation was sealed with TachoSil suggest that the patch may improve tissue healing and reduce the risk of reperforation. Thus, the aim of this study was to determine the histological effects of TachoSil coating on the healing process and to assess potential clinical benefits.

METHODS

During a laparotomy in 4 domestic Danish landrace pigs a patch of TachoSil was applied on the stomach, the duodenum, the small intestine, and the colon. 5 weeks after surgery the animals were sacrificed, the TachoSil site was excised and histo-pathological analyses were performed to determine the degree of inflammation and fibrosis.

RESULTS

Analyses of the histological samples demonstrate that Tachosil is able to induce severe but focal subserosal granulomatous inflammation and fibrosis.

CONCLUSION

Our results indicate that TachoSil may contribute to healing and potentially reduce the risk of reperforation following perforated ulcer repair.

F28:

Præoperativ højdosis steroid ved bugvægsrekonstruktion

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Baggrund: Præoperativ højdosis steroid fører til forbedrede postoperative resultater og nedsat indlæggelsestid efter flere typer kirurgi. Studier af højdosis steroid i forbindelse med bugvægsrekonstruktion findes dog ikke. Vores hypotese var, at patienter, der fik foretaget bugvægsrekonstruktion for stort incisionalhernie, ville have gavn af præoperativ højdosis steroid.

Metode: Dette var et dobbeltblindet randomiseret studie, der sammenlignede 125 mg methylprednisolon med saltvand (placebo) administreret umiddelbart før operation for incisionalhernie med en horisontal fasciedefekt ≥ 10 cm. Primære endemål var postoperative smerter, sekundært kvalme/træthed de første fem døgn, postoperative komplikationer, tid til udskrivelse og genindlæggelse. C-reaktivt protein blev målt de første tre postoperative.

Resultater: I alt 40 patienter (20 methylprednisolon og 20 placebo) gennemførte studiet og var analysérbare. Den gennemsnitlige fasciedefekt var 12,3 cm horisontalt og 14,1 cm vertikalt. Patienter allokeret til methylprednisolon havde postoperativt færre smerter i liggende position (P = 0,004), ved bevægelse (P = 0,015) og ved hoste (0,036). Der ikke signifikant forskel grupperne imellem på træthed, kvalme, postoperative komplikationer (7 vs 4), reoperationer (2 vs 0), tid til udskrivelse (median 4 vs 4 dage) eller antal genindlæggelser (4 vs 1). Anvendelsen af methylprednisolon reducerede C-reaktivt protein (P = 0,039).

Konklusion: Præoperativ højdosis steroid reducerede både smerter og det inflammatoriske respons efter bugvægsrekonstruktion for stort incisionalhernie.

F29:

ECOG performance score is an independent predictor of 30 day mortality

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BACKGROUND

Despite the importance of predicting adverse postoperative outcomes, frailty has not been systematically evaluated in emergency abdominal surgery. Our aim was to evaluate Eastern Cooperative Oncology Group (ECOG) performance score as an independent predictor of postoperative mortality following high risk emergency abdominal surgery, in a multicenter, retrospective, observational study of a consecutive cohort.

METHOD

All patients aged 18 or above undergoing high risk emergency laparotomy or laparoscopy from four emergency surgical centres in the Capitol Region of Denmark, from January 1 to December 31, 2012 were included. Demographics, preoperative status, ECOG performance score, mortality and surgical characteristics were registered. The association of frailty with postoperative mortality was evaluated using multiple regression models. Likelihood ratio-test was applied for goodness of fit.

RESULTS

In total, 1084 patients were included in the cohort; unadjusted 30 day mortality was 20.2 %. ECOG performance score was an independent predictor of 30 day mortality ($p<0.001$, Wald test), with a 78% increase in relative risk of mortality when comparing patients with an ECOG performance score of 0 to patients with an ECOG performance score of 4. Likelihood test ratio suggests a greater improvement in fit of prediction model when ECOG performance score is included.

CONCLUSION

This study found ECOG performance score to be an independent predictor of postoperative 30 day mortality among patients undergoing high risk emergency laparotomy. The benefit of including ECOG performance score in preoperative risk assessment should be evaluated in this setting.

F30:

Laparoscopic repair is superior when treating primary groin hernias in women: a nationwide register-based cohort study

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Background: Few studies have described recurrence rates after groin hernia repair in women. Our aim was to investigate if laparoscopic repair of primary groin hernias in women results in a lower reoperation rate for recurrence compared with open repairs. Furthermore, we wished to compare hernia subtypes at primary repair and reoperation.

Methods: This nationwide cohort-study was reported according to the RECORD statement. We used prospectively collected data from the Danish Hernia Database to generate a cohort of females operated for a primary groin hernia from 1998-2017. The primary outcome was reoperation for recurrence. The secondary outcome was subtype of hernia at primary repair and reoperation. All females had at least six months of follow-up.

Results: We included 13,945 primary groin hernia operations in women, of whom 649 had undergone a reoperation for recurrence. Median follow-up time was 8.8 years. The cumulative reoperation rates were lower after laparoscopic repair compared with the open techniques, for both inguinal hernias (1.8% versus 6.3%, $p<0.001$) and femoral hernias (2.2% versus 5.5%, $p=0.005$). After laparoscopic repair, 25% of inguinal hernias recurred as femoral, compared with 47% after the Lichtenstein technique ($p<0.001$). Direct inguinal hernias and femoral hernias had higher risk of reoperation for recurrence after open repair compared with indirect inguinal hernias. For laparoscopic procedures, hernia subtypes at the primary groin hernia repair had similar reoperation rates.

Conclusion: Laparoscopic repair of primary groin hernia in women had lower reoperation rates and fewer femoral recurrences than open repair techniques.

F31:

En struktureret kirurgisk morgenkonference bidrager til højere fagligt udbytte og frigiver mere lægetid

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Fagområde: Uddannelse

Baggrund

Overalt i det danske sygehusvæsen skal der effektiviseres, og arbejdstidsoptimering er en af flere strategier. Vi identificerede lægernes morgenkonference på Kirurgisk afdeling, Sygehus Sønderjylland som et potentielt mål for bedre udnyttelse af lægernes arbejdstid og det var vores håb, at vi ved optimering samtidig kunne drage større uddannelsesmæssig nytte af den afsatte tid.

Metode

Vi omstrukturerede den kirurgiske morgenkonference ved at slå den traditionelle lægelige konference og røntgenkonferencen sammen. Samtidig gjorde vi op med traditionen om at gennemgå alle akut indlagte patienter fra det foregående døgn til kun at fremlægge to til fire fagligt komplicerede eller uddannelsesmæssigt interessante cases. Anonyme spørgeskemaer om udnyttelse af tid, fagligt udbytte, relevans og plads til uddybende spørgsmål før og efter blev uddelt til alle involverede yngre- og speciallæger.

Resultater

Af de 32 læger der fik tilsendt spørgeskemaer besvarede 26 (82%). 24 rapporterede en overordnet positiv udvikling på de adspurgte parametre. 2 læger svarede at de ikke kunne se nogen positiv udvikling. Statistisk analyse bekræftede, at alle parameter bedres signifikant efter introduktionen af den nye morgenkonferencemodel.

Spørgeskemaernes interval 1-5 hvor 1 betyder lidt eller lavt og 5 betyder meget eller højt	**Før** (n=26)	**Efter** (n=26)	**P-værdi** <0.01
Spørgsmål 1: Tidseffektivitet (mean/median)	2.01 / 2	4.12 / 4	<0.01
Spørgsmål 2: Fagligt udbytte (mean/median)	2.69 / 3	3.92/ 4	<0.01
Spørgsmål 3: Relevans for uddannelse (mean/median)	2.58/ 2	3.65/ 4	<0.01
Spørgsmål 4: Mulighed for uddybende spørgsmål (mean/median)	2.50/ 2	4.00/ 4	<0.01

Kategoriske variable sammenlignet med Wilcoxon Rank Sum & Chi^2-test.

Konklusion

Ved at gøre den lægefaglige morgenkonference mere målrettet enkelte patientcases og integrere radiologerne i selve konferencen, opnåede vi et subjektivt vurderet højere både uddannelses værdi og fagligt udbytte af morgenkonferencen og en bedre udnyttelse af kirurgernes arbejdstid. Udover det har

ændringen reelt frigivet ca. 20 min til andre arbejdsopgaver. Taget i betragtning, at der er ca. 15 læger hver dag til morgenkonferencen, svarer dette til 1 ekstra lægestilling.

F32:

Validering af risikoscoren POSPOM (Preoperative Score to Predict Postoperative Mortality) hos patienter der får foretaget stor akut kirurgi

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Baggrund
Dødelighed er høj hos patienter, der får foretaget stor akut kirurgi. Disse patienter udgør omkring 10% af alle kirurgiske procedure foretaget på en almen kirurgisk afdeling, men står for mere end 80% af mortaliteten. Præoperative risikoscorer til identifikation af patienter med høj risiko for at dø kan være behjælpelige i den kliniske beslutningsproces. Således kan den enkelte kirurg bedre kan identificere de patienter, der har brug for en særlig indsats både præ- og postoperativt.
Formålet med dette studie var at validere POSPOM (Preoperative Score to Predict Postoperative Mortality) i en population af patienter, der får foretaget stor akut kirurgi.

Metode
POSPOM blev undersøgt i en retrospektiv kohorte af patienter, der fik foretaget stor akut kirurgi på Sjællands Universitetshospital fra 2010 til 2016. Den forventede dødelighed i kohorten bestemt ved POSPOM blev sammenlignet med den observerede dødelighed. Kalibreringen af POSPOM blev undersøgt med en Hosmer-Lemeshow goodness-of-fit test. Diskriminationen blev undersøgt ved hjælp af arealet under ROC-kurven og nøjagtigheden (accuracy) blev undersøgt med en Brier score.

Resultater
Der indgik i alt 979 patienter (513 kvinder) i studiet med en median alder på 64 år (interkvartil range 55-77 år). Størstedelen af patienterne fik foretaget åben kirurgi (94,5%) med og uden tarmresektion (48,7% og 44,2%). Den observerede dødelighed var 10,9%, mens den prædikterede dødelighed bestemt ved POSPOM var 6,7%. POSPOM havde en god diskrimination (AUC 0,82;95% CI, 0.78-0.85) og en særdeles god nøjagtighed (Brier score 0.09 (95% CI, 0.07-0.10)). POSPOM var dog dårligt kalibreret ($p < 0.01$), da den underestimerede dødeligheden. Dette var særligt i den del af populationen med en lav risiko for at dø.

Konklusion
POSPOM havde en god diskrimination, idet de patienter der havde høj risiko for at dø, også fik en høj score, men POSPOM havde ikke en optimal kalibrering, da den underestimerede dødeligheden særligt hos de patienter med en lav risiko for at dø.

F33:

EFFECT OF HOSPITAL ADMISSION VOLUMES ON OUTCOMES FOLLOWING ACUTE NON-VARICEAL UPPGER GASTROINTESTINAL BLEEDING

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Background:
Treatment-requiring acute non-variceal upper gastro-intestinal bleeding (NVUGIB) is a common, potentially life-threatening emergency. This study investigates whether hospital admittance volume of NVUGIB patients was associated with reduced mortality, reduced lasting failure of hemostatic procedures defined as rate of re-endoscopy with repeated hemostasis intervention (ReWHI), transfusion requirements and conversion to surgery.

Methods:
A data characterization of Danish nationwide admissions of patients with acute NVUGIB from 2011-2013 was made in order to estimate 30-day mortality, rebleeding (ReWHI), transfusion rates and rates of conversion to surgery
Data were analyzed by regression modeling while controlling for confounders including age, admission hemoglobin, American College of Anesthesiology (ASA) score, comorbidities and Forrest classification.

Results:
3537 patients with acute non-variceal upper gastrointestinal bleeding were included in the study. Hospital admission volume of NVUGIB patients was positively associated with a significant increase in ReWHI with OR 1.27 ($p=1.91*10^{-6}$). There was no significant association between admission volume and conversion to surgery, 30-day mortality or transfusion rates.

Conclusion:
A positive association between admission volumes of NVUGIB patients and ReWHI was identified. No association between admission volumes and 30-day mortality or other failure of hemostasis events could be identified.

F34:

A CHARACTERISATION OF INJURY PATTERNS AND INTERVENTIONS IN TRAUMA PATIENTS ADMITTED TO A DANISH LEVEL 1 TRAUMA CENTER

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Background: Trauma is a complex disease, and treatment protocols require up to date information on the cohort and demographics of patients. Information on severely injured Danish trauma patients is limited and constitutes the focus of this study.

Methods: Retrospective trauma patient cohort from Copenhagen University Hospital, Rigshospitalet obtained October 2013 to April 2014. Inclusion criteria were Patients with Injury Severity Score (ISS) > 15. Patients were registered in Danish Contact Registration Database, (Grønt System) and cross referenced with trauma-relevant data submitted to the Trauma Audit and Research Network (TARN).

Results: 125 patients were admitted with an ISS > 15. Median age was 57 years. Male patients dominate in all age categories. Median Hospital Length of Stay was 8 days.

80% of patients presented with injuries to more than one anatomical region. Head injuries were frequently encountered (64% of patients) followed by chest (52% of patients), limbs (47% of patients), spine (35% of patients), facial (29% of patients) and abdominal injuries (24% of patients). Overall, 6.4% patients arrived hypotensive (Systolic Blood Pressure <90mmHg). 7% required chest tubes and 41% needed tracheal intubation. Neurological pressure screws were needed in 14%. Overall, 50% of patients required surgical intervention. Mortality was 12% with 40% of fatalities occurring within the first 24 hours.

Conclusion: Severely injured trauma patients admitted to Rigshospitalet present with injuries to multiple anatomical regions, and frequently require operative intervention.

Head injuries are the most common injury, with early fatalities dominating the mortality spectrum.

F35:

High risk of pathologic findings at return visit after prior emergency admission for non-specific abdominal pain

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Introduction

Although not supported by evidence patients may be at risk of overlooking pathologic findings at return visit after prior emergency admission for non-specific abdominal pain (NSAP). The primary aim of the present study was to evaluate the risk of missed acute pathology in patients primarily discharged with NSAP and re-admitted within 3 months.

Methods

Retrospective review of hospital records within a 3-month period (September 1 – November 30, 2014) in a university hospital with unrestricted referral of abdominal emergency patients. Patients fulfilling the criteria for NSAP were included in the study.

Results

Of 1,474 patients admitted with acute abdominal pain, 390 (26%) were discharged with NSAP; 16% of patients discharged with NSAP were re-admitted for abdominal pain. At re-admittance, 39% received a verified specific diagnosis, corresponding to 6% of all patients with the NSAP diagnosis. For re-admissions after NSAP diagnosis, 40% were related to the biliary tract (cholelithiatis, cholangitis and cholecystitis). Comorbidity, nausea, vomiting, and increased white blood cell count at primary admission were significantly associated with the risk of missing a specific diagnosis ($P<0.05$).

Conclusion

Patients returning to hospital after discharge with the diagnosis NSAP have a relatively high risk of suffering from a significant somatic disease or condition and should undergo thorough clinical and paraclinical investigations.