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Coloproctologie

Geen voordeel van standaard achterlaten drain in het kleine bekken na lage rectumchirurgie

To Drain or Not to Drain Infraperitoneal Anastomosis After Rectal Excision for Cancer: The GRECCAR 5 Randomized Trial, Denost Q, Annals of Surgery; March 2017 – Volume 265 – Issue 3 – p 474-480 PMID: 27631776

OBJECTIVE: To assess the effect of pelvic drainage after rectal surgery for cancer.

BACKGROUND: Pelvic sepsis is one of the major complications after rectal excision for rectal cancer. Although many studies have confirmed ineffectiveness of drainage after colectomy, there is still a controversy after rectal surgery.

METHODS: This multicenter randomized trial with 2 parallel arms (drain vs no drain) was performed between 2011 and 2014. Primary endpoint was postoperative pelvic sepsis within 30 postoperative days, including anastomotic leakage, pelvic abscess, and peritonitis. Secondary endpoints were overall morbidity and mortality, rate of reoperation, length of hospital stay, and rate of stoma closure at 6 months.

RESULTS: A total of 494 patients were randomized, 25 did not meet the criteria and 469 were analyzed: 236 with drain and 233 without. The anastomotic height was 3.5 ± 1.9 cm from the anal verge. The rate of pelvic sepsis was 17.1% (80/469) and was similar between drain and no drain: 16.1% versus 18.0% ($P = 0.58$). There was no difference of surgical morbidity (18.7% vs 25.3%; $P = 0.83$), rate of reoperation (16.6% vs 21.0%; $P = 0.22$), length of hospital stay (12.2 vs 12.2; $P = 0.99$) and rate of stoma closure (80.1% vs 77.3%; $P = 0.53$) between groups. Absence of colonic pouch was the only independent factor of pelvic sepsis (odds ratio = 1.757; 95% confidence interval 1.078-2.864; $P = 0.024$).

CONCLUSIONS: This randomized trial suggests that the use of a pelvic drain after rectal excision for rectal cancer did not confer any benefit to the patient.

Leeftijd, transfusie en psychiatrische voorgeschiedenis zijn risicofactoren voor delier na colonchirurgie

Risk factors for postoperative delirium after colorectal operation, Van der Sluis F, Surgery: March 2017, Volume 161, Issue 3, Pages 704–711

Background. A clear understanding of risk factors for postoperative delirium helps in the selection of individuals who might benefit from targeted perioperative intervention. The aim of this study was to identify risk factors for postoperative delirium after colorectal operation for malignancy.

Methods.

All consecutive patients who underwent elective or emergency operation because of malignancy of the colon, sigmoid, or rectum between 2009 and 2012 were included in this study. Potential risk factors for postoperative delirium were selected based on previous studies. These candidate factors were analyzed using univariate and multivariate logistic regression analysis. Based on this analysis, odds ratios and 95% confidence intervals were estimated.

Results.

A total of 436 patients underwent an oncologic resection of the colon, sigmoid, or rectum. Postoperative delirium was observed in 45 (10.3%) patients. Patients with a delirium had a greater in-hospital mortality rate (8.9% vs 3.6%, $P = .09$), spent more days in the intensive care unit, and had a longer total hospital stay. Variables associated with postoperative delirium in univariate analyses were age, American Society of Anesthesiologists classification, blood transfusion, history of psychiatric disease, history of cerebrovascular disease, postoperative pain management, postoperative renal impairment, C-reactive protein levels, leukocyte blood count, and postoperative complications. Independent risk factors were history of psychiatric disease (odds ratio 8.38, 95% confidence interval: 1.50–46.82), age (odds ratio 4.01, 95% confidence interval: 1.55–10.37), and perioperative blood transfusion (odds ratio 2.37, 95% confidence interval: 1.11–5.06).

Conclusion.

This study shows that postoperative delirium is a frequently encountered complication after colorectal operation. Three independent risk factors for postoperative delirium were identified (history of psychiatric disease, age, and perioperative transfusion) that may contribute to risk estimation in this patient population.

Upper GI

Orale immunonutritie reduceert het gewichtsverlies na totale gastrectomie in verband met maagcarcinoom niet

Randomized clinical trial comparing standard diet with perioperative oral immunonutrition in total gastrectomy for gastric cancer. Ida S et al BJS, March 2017 – Volume 104 – Issue 4, PMID: 28072447

BACKGROUND: Total gastrectomy for gastric cancer is associated with excessive weight loss and decreased calorie intake. Nutritional support using eicosapentaenoic acid modulates immune function and limits catabolism in patients with advanced cancer, but its impact in the perioperative period is unclear.

METHODS: This was a randomized phase III clinical trial of addition of eicosapentaenoic acid-rich nutrition to a standard diet in patients having total gastrectomy for gastric cancer. Patients were randomized to either a standard diet or standard diet with oral supplementation of an

eicosapentaenoic acid (ProSure®), comprising 600 kcal with 2.2 g eicosapentaenoic acid, for 7 days before and 21 days after surgery. The primary endpoint was percentage bodyweight loss at 1 and 3 months after surgery.

RESULTS: Of 127 eligible patients, 126 were randomized; 124 patients (61 standard diet, 63 supplemented diet) were analysed for safety and 123 (60 standard diet, 63 supplemented diet) for efficacy. Across both groups, all but three patients underwent total gastrectomy with Roux-en-Y reconstruction. Background factors were well balanced between the groups. Median compliance with the supplement in the immunonutrition group was 100 per cent before and 54 per cent after surgery. The surgical morbidity rate was 13 per cent in patients who received a standard diet and 14 per cent among those with a supplemented diet. Median bodyweight loss at 1 month after gastrectomy was 8.7 per cent without dietary supplementation and 8.5 per cent with eicosapentaenoic acid enrichment ($P = 0.818$, adjusted $P = 1.000$). Similarly, there was no difference between groups in percentage bodyweight loss at 3 months ($P = 0.529$, adjusted $P = 1.000$).

CONCLUSION: Immunonutrition based on an eicosapentaenoic acid-enriched oral diet did not reduce bodyweight loss after total gastrectomy for gastric cancer compared with a standard diet.

Postoperatieve complicaties zijn geassocieerd met slechtere overleving bij patienten met plaveiselcel carcinoom van de slokdarm

The development of postoperative complications is an independent disease-specific poor prognostic factor after curative resection for patients with less-advanced esophageal squamous cell carcinoma. Saeki H.

Annals of Surgery; March 2017 – Volume 265 – Issue 3 – p 527-533. PMID: 28169928

OBJECTIVE: The objective of this study was to elucidate the impact of postoperative complications on long-term survival after curative resection for esophageal squamous cell carcinoma.

BACKGROUND: The relation between postoperative complications and long-term survival after curative surgery for esophageal squamous cell carcinoma is controversial; thus, this issue should be resolved with a large-scale, well-designed study.

METHODS: Clinicopathological features and survival of 580 consecutive patients who received curative resection for esophageal squamous cell carcinoma were investigated according to the development of postoperative pulmonary complications and anastomotic leakage.

RESULTS: The 5-year survival rates of patients with pStage 0, I, and II disease with postoperative complications ($n = 116$) were significantly poorer than those of patients without postoperative complications ($n = 288$) (overall 69.6% vs 46.9%, $P < 0.0001$; disease-specific; 76.7% vs 58.9%, $P < 0.0022$), whereas no differences were found in patients with pStage III and IV disease ($n = 176$). In the univariate and multivariate analyses for disease-specific survival, pT3, pT4, pN positivity, and development of postoperative complications were significant prognostic factors in all patients. Also, when the analysis was limited to the pStage 0, I, and II patients, development of postoperative complications, and pT3, pT4, and pN positivity, were found to be independent poor prognostic factors in multivariate analyses (hazard ratio: 1.56, 95% confidence interval, 1.01-2.41, $P = 0.0476$).

CONCLUSIONS: The development of postoperative complications is an independent disease-specific poor prognostic factor after curative resection for patients with less-advanced esophageal squamous cell carcinoma.

HPB

Stadieringslaparoscopie bij radiologisch occulte metastasen van cholangiocarcinoom is zinvol

Role of staging laparoscopy in the stratification of patients with perihilar cholangiocarcinoma. Bird N, BJS, March 2017 – Volume 104 – Issue 4, pages 418-425. PMID: 27861766

BACKGROUND: Cholangiocarcinoma is a rare cancer with a poor prognosis. Radical surgical resection is the only option for curative treatment. Optimal determination of resectability is required so that patients can be stratified into operative or chemotherapeutic treatment cohorts in an accurate and time-efficient manner. Staging laparoscopy is utilized to determine the presence of radiologically occult disease that would preclude further surgical treatment. The aim of this study was to analyse the utility of staging laparoscopy in a contemporary cohort of patients with perihilar cholangiocarcinoma.

METHODS: Patients diagnosed with potentially resectable perihilar cholangiocarcinoma between January 2010 and April 2015 were analysed retrospectively from a prospective database linked to UK Hospital Episode Statistics data. Patients with distal cholangiocarcinoma and gallbladder cancer were excluded from analysis.

RESULTS: A total of 431 patients with perihilar cholangiocarcinoma were referred for assessment of potential resection at a supraregional referral centre. Some 116 patients with potentially resectable disease subsequently underwent surgical assessment. The cohort demonstrated an all-cause yield of staging laparoscopy for unresectable disease of 27.2 per cent (31 of 114). The sensitivity for detection of peritoneal disease was 71 per cent (15 of 21; $P < 0.001$). The accuracy for all-cause non-resection for staging laparoscopy was 66 per cent (31 of 47) with a positive predictive value of progress to resection of 81 per cent (69 of 85). Neither the Bismuth-Corlette nor the Memorial Sloan Kettering Cancer Center preoperative scoring system was contingent with cause of unresectability at staging laparoscopy ($P = 0.462$ and $P = 0.280$ respectively).

CONCLUSION: In the present cohort, staging laparoscopy proved useful in determining the presence of radiologically occult metastatic disease in perihilar cholangiocarcinoma.

Het plaatsen van een PGA Mesh tegen het pancreas-snijvlak vermindert fistelvorming na pancreaticoduodenectomie.

Wrapping of the cut surface of the pancreas with PGA mesh is associated with a significantly reduced rate of clinically relevant POPF. Jang J, JAMA Surg. 2017;152(2):150-155. PMID: 27784046

IMPORTANCE: The rate of postoperative pancreatic fistula (POPF) after distal pancreatectomy ranges from 13% to 64%. To prevent POPF, polyglycolic acid (PGA) mesh was introduced, but its effect has been evaluated only in small numbers of patients and retrospective studies.

OBJECTIVE: To evaluate the efficacy of PGA mesh in preventing POPF after distal pancreatectomy.

DESIGN: Prospective randomized clinical, single-blind (participant), parallel-group trial at 5 centers between November 2011 and April 2014. The pancreatic parenchyma was divided using a stapling device; no patient was given prophylactic octreotide. Perioperative and clinical outcomes were compared including POPF, which was graded according to the criteria of the International Study Group For Pancreatic Fistulas. A total of 97 patients aged 20 to 85 years with curable benign, premalignant, or malignant disease of the pancreatic body or tail were enrolled (44 in the PGA group and 53 in the control group).

INTERVENTIONS: Patients in the PGA group underwent transection of the pancreas and application of fibrin glue followed by wrapping the PGA mesh around the remnant pancreatic stump.

MAIN OUTCOMES: The primary end point of this study was the development of a clinically relevant POPF (grade B or C by the International Study Group grading system). The secondary end point was the evaluation of risk factors for POPF.

RESULTS: The study therefore evaluated a total of 97 patients, 44 in the PGA group and 53 in the control group. Thirty-nine patients were women and 58 patients were men. There were no differences in mean (SD) age (59.9 [12.0] years vs 54.5 [14.1] years, $P = .05$), male to female ratio (1.0:1.3 vs 1.0:1.7, $P = .59$), malignancy (40.9% vs 32.1%, $P = .37$), mean (SD) pancreatic duct diameter (1.92 [0.75] mm vs 1.94 [0.95] mm, $P = .47$), soft pancreatic texture (90.9% vs 83.0%, $P = .17$), and mean (SD) thickness of the transection margin (16.9 [5.4] mm vs 16.4 [4.9] mm, $P = .63$) between the PGA and control groups. The rate of clinically relevant POPF (grade B or C) was significantly lower in the PGA group than in the control group (11.4% vs 28.3%, $P = .04$).

CONCLUSIONS: Wrapping of the cut surface of the pancreas with PGA mesh is associated with a significantly reduced rate of clinically relevant POPF.

Leverchirurgie

Effect van vena porta embolisatie op volumevergroting en functie van de lever vergelijkbaar tussen konijnen en mensen

Comparable liver function and volume increase after portal vein embolization in rabbits and humans. Olthof P, Surgery: March 2017, Volume 161, Issue 3, Pages 658–665. PMID: 27769661

Portal vein embolization is the gold standard approach to preoperatively enhance the future liver remnant before liver resection. Portal vein embolization is studied in several experimental animal models; however, clinical translation of results is often difficult. We aimed to examine the translational value of the portal vein embolization response in a standardized rabbit model by comparing the volume and function increase with the response seen in patients.

METHODS: Six rabbits were subjected to embolization of the cranial liver lobes, and the hypertrophy response of the caudal liver lobe was studied using computed tomography volumetry and Technetium-99m-labeled-mebrofenin hepatobiliary scintigraphy. Results were compared to those from patients who underwent portal vein embolization between 2005 and 2014. All patients were subjected to computed tomography volumetry and hepatobiliary scintigraphy before and after portal vein embolization.

RESULTS: The increase in liver function of the caudal liver lobe in rabbits was faster compared to the increase in liver volume. There was no decrease in total liver function after portal vein embolization. Results in patients were similar to rabbits, with a faster increase in liver function compared to patients and no decrease in total liver function after portal vein embolization.

CONCLUSION: The portal vein embolization response in terms of liver volume and function is similar between rabbits and humans. Accordingly, the rabbit model is a suitable tool to study portal vein embolization-related parameters that cannot be investigated in patients.

Bariatrische chirurgie

Verhoogd risico op perinatale complicaties binnen twee jaar na bariatrische chirurgie

Timing Between an Operation and Birth, and Associated Perinatal Complication Bariatric Surgery in Women of Childbearing Age B. Parent, JAMA Surg. 2017;152(2):1-8; PMID: 27760265

IMPORTANCE: Metabolic changes after maternal bariatric surgery may affect subsequent fetal development. Many relevant perinatal outcomes have not been studied in this postoperative population, and the risks associated with short operation-to-birth (OTB) intervals have not been well examined.

OBJECTIVE: To examine the risk for perinatal complications in women with a history of bariatric surgery (postoperative mothers [POMs]) by comparing them with mothers without operations (nonoperative mothers [NOMs]) and examining the association of the OTB interval with perinatal outcomes.

DESIGN, SETTING, AND PARTICIPANTS: This investigation was a population-based retrospective cohort study (January 1, 1980, to May 30, 2013) at hospitals in Washington State. Data were collected from birth certificates and maternally linked hospital discharge data. Participants were all POMs and their infants (n = 1859) and a population-based random sample of NOMs and their infants frequency matched by delivery year (n = 8437).

EXPOSURES: Bariatric operation before birth or categories of OTB intervals.

MAIN OUTCOMES AND MEASURES: The primary outcomes were prematurity, neonatal intensive care unit (NICU) admission, congenital malformation, small for gestational age (SGA), birth injury, low Apgar score (≤ 8), and neonatal mortality. Poisson regression was used to compute relative risks (RRs) and 95% CIs, with adjustments for maternal body mass index, delivery year, socioeconomic status, age, parity, and comorbid conditions.

RESULTS: A total of 10 296 individuals were included in the analyses for this study. In the overall cohort, the median age was 29 years (interquartile range, 24-33 years). Compared with infants from NOMs, infants from POMs had a higher risk for prematurity (14.0% vs 8.6%; RR, 1.57; 95% CI, 1.33-1.85), NICU admission (15.2% vs 11.3%; RR, 1.25; 95% CI, 1.08-1.44), SGA status (13.0% vs 8.9%; RR, 1.93; 95% CI, 1.65-2.26), and low Apgar score (17.5% vs 14.8%; RR, 1.21; 95% CI, 1.06-1.37). Compared with infants from mothers with greater than a 4-year OTB interval, infants from mothers with less than a 2-year interval had higher risks for prematurity (11.8% vs 17.2%; RR, 1.48; 95% CI, 1.00-2.19), NICU admission (12.1% vs 17.7%; RR, 1.54; 95% CI, 1.05-2.25), and SGA status (9.2% vs 12.7%; RR, 1.51; 95% CI, 0.94-2.42).

CONCLUSIONS AND RELEVANCE: Infants of mothers with a previous bariatric operation had a greater likelihood of perinatal complications compared with infants of NOMs. Operation-to-birth intervals of less than 2 years were associated with higher risks for prematurity, NICU admission, and SGA status compared with longer intervals. These findings are relevant to women with a history of bariatric surgery and could inform decisions regarding the optimal timing between an operation and conception.

Vergelijkbare 3-jaars uitkomsten tussen laparoscopische sleeve gastrectomie en Roux-Y gastric bypass

Laparoscopic Sleeve Gastrectomy Versus Roux-Y-Gastric Bypass for Morbid Obesity 3-Year Outcomes of the Prospective Randomized Swiss Multicenter Bypass Or Sleeve Study (SM-BOSS),

Peterli R, Annals of Surgery; March 2017 – Volume 265 – Issue 3 – p 466-473 PMID: 28170356

OBJECTIVE: Laparoscopic sleeve gastrectomy (LSG) is performed almost as often in Europe as laparoscopic Roux-Y-Gastric Bypass (LRYGB). We present the 3-year interim results of the 5-year prospective, randomized trial comparing the 2 procedures (Swiss Multicentre Bypass Or Sleeve Study; SM-BOSS).

METHODS: Initially, 217 patients (LSG, n = 107; LRYGB, n = 110) were randomized to receive either LSG or LRYGB at 4 bariatric centers in Switzerland. Mean body mass index of all patients was 44 ± 11 kg/m, mean age was 43 ± 5.3 years, and 72% of patients were female. Minimal follow-up was 3 years with a rate of 97%. Both groups were compared for weight loss, comorbidities, quality of life, and complications.

RESULTS: Excessive body mass index loss was similar between LSG and LRYGB at each time point (1 year: $72.3 \pm 21.9\%$ vs. $76.6 \pm 20.9\%$, $P = 0.139$; 2 years: $74.7 \pm 29.8\%$ vs. $77.7 \pm 30\%$, $P = 0.513$; 3 years: $70.9 \pm 23.8\%$ vs. $73.8 \pm 23.3\%$, $P = 0.316$). At this interim 3-year time point, comorbidities were significantly reduced and comparable after both procedures except for gastro-esophageal reflux disease and dyslipidemia, which were more successfully treated by LRYGB. Quality of life increased significantly in both groups after 1, 2, and 3 years postsurgery. There was no statistically significant difference in number of complications treated by reoperation (LSG, n = 9; LRYGB, n = 16, $P = 0.15$) or number of complications treated conservatively.

CONCLUSIONS: In this trial, LSG and LRYGB are equally efficient regarding weight loss, quality of life, and complications up to 3 years postsurgery. Improvement of comorbidities is similar except for gastro-esophageal reflux disease and dyslipidemia that appear to be more successfully treated by LRYGB.