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Coloproctologie

Laparoscopie significant goedkoper dan open chirurgie in electieve chirurgie voor coloncarcinoom

OBJECTIVE

To compare actual 90-day hospital costs between elective open and laparoscopic colon and rectal cancer resection in a daily practice multicenter setting stratified for operative risk.

BACKGROUND

Laparoscopic resection has developed as a commonly accepted surgical procedure for colorectal cancer. There are conflicting data on the influence of laparoscopy on hospital costs, without separate analyses based on operative risk.

METHODS

Retrospective analyses using a population-based database (Dutch Surgical Colorectal Audit). All elective resections for a T1-3N0-2M0 stage colorectal cancer were included between 2010 and 2012 in 29 Dutch hospitals. Operative risk was stratified for age (<75 years or ≥75 years) and ASA status (I-II/III-IV). Ninety-day hospital costs were measured uniformly in all hospitals based on time-driven activity-based costing.

RESULTS

Total 90-day hospital costs ranged from €10474 to €20865 in the predefined subgroups. For colon cancer surgery (N = 4202), laparoscopic resection was significant less expensive than open resection in all subgroups, savings because of laparoscopy ranged from €409 (<75 years ASA I-II) to €1932 (≥75 years ASA I-II). In patients ≥75 years and ASA I-II, laparoscopic resection was associated with 46% less mortality (P = 0.05), 41% less severe complications (P < 0.001), 25% less hospital stay (P = 0.013), and 65% less ICU stay (P < 0.001). For rectal cancer surgery (N=2328), all laparoscopic subgroups had significantly higher total hospital costs, ranging from €501 (<75 years ASA I-II) to €2515 (≥75 years ASA III-IV).

CONCLUSIONS

Laparoscopic resection resulted in the largest cost reduction in patients over 75 years with ASA I-II undergoing colonic resection, and the largest cost increase in patients over 75 years with ASA III-IV undergoing rectal resection as compared with an open approach.

Gerandomiseerde studie naar tweetal op alcohol-gebaseerde huisdesinfectantia in colorectaal chirurgie

OBJECTIVE

To compare 2 alcohol-based, dual-action skin preparations for surgical site infection (SSI) prevention in elective colorectal surgery.

BACKGROUND

Colorectal surgery is associated with the highest SSI rate among elective surgical procedures. Although evidence indicates that alcohol-based skin preparations are superior in SSI prevention, it is not clear if different alcohol-based preparations are equivalent in clean-contaminated colorectal procedures.

METHODS

We performed a blinded, randomized, noninferiority trial comparing iodine povacrylex-alcohol (IPA) and chlorhexidine-alcohol for elective, clean-contaminated colorectal surgery. The primary outcome was the presence or absence of SSI, defined as superficial or deep SSI, within 30 days postdischarge. A 6.6% noninferiority margin was chosen.

RESULTS

Between January 2011 and January 2015, 802 patients were randomized with 788 patients included in the intent to treat analysis (396 IPA and 392 chlorhexidine-alcohol). The difference in overall SSI rate between IPA (18.7%) and chlorhexidine-alcohol (15.9%) was 2.8% (P = 0.30). The upper bound of the 2.5% confidence interval of this difference was 8.9%, which is greater than the prespecified noninferiority margin of 6.6%. Other endpoints, including individual SSI types, time to SSI diagnosis, and length of stay were not different between the 2 arms.

CONCLUSIONS

In patients undergoing elective, clean contaminated colorectal surgery, the use of IPA failed to meet criterion for noninferiority for overall SSI prevention compared with chlorhexidine-alcohol. Photodocumentation of wounds and rigorous tracking of outcomes up to 30 days postdischarge contributed to high fidelity to current standard SSI descriptions and wound classifications.

UPPER GI

Geen overlevingswinst voor gemetastaseerde maagkankerpatiënten ondanks veranderingen in mate van chirurgie en gebruik van chemotherapie over tijd

BACKGROUND

This study assessed trends in the treatment and survival of palliatively treated patients with gastric cancer, with a focus on age-related differences.

METHOD

For this retrospective, population-based, nationwide cohort study, all patients diagnosed between 1989 and 2013 with non-cardia gastric cancer with metastasized disease or invasion into adjacent structures were selected from the Netherlands Cancer Registry. Trends in treatment and 2-year overall survival were analysed and compared between younger (age less than 70 years) and older

(aged 70 years or more) patients. Analyses were done for five consecutive periods of 5 years, from 1989–1993 to 2009–2013. Multivariable logistic regression analysis was used to examine the probability of undergoing surgery. Multivariable Cox regression analysis was used to identify independent risk factors for death.

RESULTS

Palliative resection rates decreased significantly in both younger and older patients, from 24·5 and 26·2 per cent to 3·0 and 5·0 per cent respectively. Compared with patients who received chemotherapy alone, both younger (21·6 versus 6·3 per cent respectively; P < 0·001) and older (14·7 versus 4·6 per cent; P < 0·001) patients who underwent surgery had better 2-year overall survival rates. Multivariable analysis demonstrated that younger and older patients who received chemotherapy alone had worse overall survival than patients who had surgery only (younger: hazard ratio (HR) 1·22, 95 per cent c.i. 1·12 to 1·33; older: HR 1·12, 1·01 to 1·24). After 2003 there was no association between period of diagnosis and overall survival in younger or older patients.

CONCLUSION

Despite changes in the use of resection and chemotherapy as palliative treatment, overall survival rates of patients with advanced and metastatic gastric cancer did not improve.

Endoscopische submucosale dissectie zeer succesvol voor oppervlakkig proximaal oesophagusneoplasie

OBJECTIVE

The aim of this study was to evaluate the outcomes of endoscopic submucosal dissection (ESD) for superficial proximal esophageal neoplasia.

Summary of Background Data

The surgery for a tumor located in proximal esophagus is relatively difficult and leads to a high morbidity and mortality. ESD is a minimally invasive endoscopic treatment of superficial neoplasia of the gastrointestinal tract allowing en block resection with low recurrence rates; however, ESD for superficial proximal esophageal neoplasia is little known.

METHODS

We retrospectively analyzed 102 consecutive patients who fit the inclusion criteria with 106 lesions who underwent ESD from February 2009 to July 2015 at the Zhongshan Hospital, Fudan University in Shanghai, China. During the study, the en bloc and pathologically complete resection rates, complication rate, incidence of esophageal stricture after ESD, disease-specific, and overall survival rates were evaluated.

RESULTS

The mean age was 62 (45–84) years with 100% en bloc resection rate. The mean operation time was 48 (10–144) minutes. The mean diameter of the resected tumors was 2.9 (1.2–6.5) cm. The pathological diagnoses were high-grade intraepithelial dysplasia in 45 (42.5%) lesions, and the rest were squamous cell carcinoma with staging of intraepithelial in 18 (17.0%), lamina propria in 13 (12.3%), muscularis mucosa in 16 (15.1%), SM1 in 10 (9.4%), and SM2 or deeper in 4 (3.8%) of the lesions. The R0 resection rates were 94.3% (100/106). There was no delayed bleeding. Two small perforations observed were closed successfully with clips. Symptomatic esophageal strictures in 17 (16.7%) patients were treated by endoscopic balloon dilation with a mean of 4 (1–14) times and 88.2% (15/17) success. Additional treatments of esophagectomy or chemoradiotherapy were recommended to patients with SM1 or deeper neoplasia or incomplete resection. Local recurrence was observed in 3 (2.9%) cases. Fifteen patients were lost to follow-up. Five-year overall survival rate was 98% and disease-specific survival rate was 100%. The mean follow-up time was 33.6 months.

CONCLUSIONS

ESD for the superficial proximal esophageal neoplasia is a safe and a very effective treatment method with a 100% 5-year disease-specific survival rate.

HPB

Maligne ziekte, tumor grootte, en BMI geen reden om open i.p.v. laparoscopische distale pancreatectomie uit te voeren

Nationwide Evaluation of Patient Selection for Minimally Invasive Distal Pancreatectomy Using American College of Surgeons' National Quality Improvement Program; Annals of Surgery 2017; 266 (6): 1062-1068.
Pubmed ID: 27607097

OBJECTIVE
To assess current nationwide case selection factors for minimally invasive distal pancreatectomy (MIDP) and identify actual risk factors for adverse outcomes compared with open distal pancreatectomy (ODP).

BACKGROUND
Patient selection criteria that predict outcomes after MIDP remain unknown. As a result, widespread adoption of this surgical technique may have been delayed and its potential benefits possibly under-exploited.

METHODS
Retrospective cohort study of elective ODP and MIDP performed at 106 centers in 2014, using the pancreas-targeted American College of Surgeons' National Quality Improvement Program (ACS-NSQIP) database. Exclusion criteria were neoadjuvant treatment or pancreatitis as only diagnosis. Primary outcome includes a composite major morbidity metric, reflecting adverse events including mortality and reoperation. Multivariable modeling was used to detect current selection factors and to identify actual risk factors of composite major morbidity.

RESULTS
A total of 928 patients underwent ODP (n = 472) or MIDP (n = 456) using a laparoscopic or robot-assisted approach, 24% for pancreatic ductal adenocarcinoma (PDAC). Current selection factors for MIDP were benign disease (odds ratio: OR: 1.56, CI: 1.10–2.21) and body mass index (BMI) 30–40 (OR: 1.41, CI: 1.04–1.91). Current selection factors for ODP were PDAC (OR: 0.45, CI: 0.31–0.64), benign tumor size >5 centimeters (OR: 0.40, CI: 0.23–0.67), and multivisceral procedures (OR: 0.39, CI: 0.26–0.59). Risk factors for composite major morbidity did not differ between ODP and MIDP. A trend was observed between MIDP and a lower risk of composite major morbidity compared with ODP (OR: 0.43, CI: 0.17–1.07).

CONCLUSIONS
Current selection factors for ODP or MIDP (benign disease, tumor size, and BMI) do not mitigate the risk of major morbidity. We found no evidence that MIDP should be avoided based on tumor etiology or size, BMI, or patient physical status.

Welke klinische factoren zijn geassocieerd met een major pathologische respons na preoperatieve therapie bij pancreascarcinoom?

Association of Clinical Factors With a Major Pathologic Response Following Preoperative Therapy for Pancreatic Ductal Adenocarcinoma; Cloyd et al; JAMA Surg 2017; 152(11); 1048-1056.
Pubmed ID: 28700784

IMPORTANCE

We previously demonstrated that a major pathologic response to preoperative therapy, defined histopathologically by the presence of less than 5% viable cancer cells in the surgical specimen, is an important prognostic factor for patients with pancreatic ductal adenocarcinoma. However, to our knowledge, the patients most likely to experience a significant response to therapy are undefined.

OBJECTIVE

To identify clinical factors associated with major pathologic response in a large cohort of patients who underwent preoperative therapy and pancreatectomy for pancreatic ductal adenocarcinoma.

Design, Setting, and Participants

Retrospective review of a prospectively maintained database at University of Texas MD Anderson Cancer Center. The study included 583 patients with histopathologically confirmed pancreatic ductal adenocarcinoma who received preoperative therapy prior to pancreatectomy between 1990 and 2015.

EXPOSURES

Preoperative therapy consisted of systemic chemotherapy alone (n = 38; 6.5%), chemoradiation alone (n = 261; 44.8%), or both (n = 284; 48.7%) prior to pancreatoduodenectomy (n = 514; 88.2%), distal pancreatectomy (n = 62; 10.6%), or total pancreatectomy (n = 7; 1.2%).

Main Outcomes and Measures

Clinical variables associated with a major pathologic response (pathologic complete response or <5% residual cancer cells) were evaluated using logistic regression.

RESULTS

Among all patients, the mean (SD) age was 63.7 (9.2) years, and 53.0% were men. A major pathologic response was seen in 77 patients (13.2%) including 23 (3.9%) who had a complete pathologic response. The median overall survival duration was significantly longer for patients who had a major response than for those who did not (73.4 months vs 32.2 months, P < .001). On multivariate logistic regression, only age younger than 50 years, baseline serum cancer antigen 19-9 level less than 200 U/mL, and gemcitabine as a radiosensitizer were associated with a major response. The number of these positive factors was associated with the likelihood of a major response in a stepwise fashion (0, 7.5%; 1, 12.7%; 2, 16.9%; 3, 35.7%; P = .009).

CONCLUSIONS AND RELEVANCE

Although a major pathologic response occurs infrequently following preoperative therapy for pancreatic ductal adenocarcinoma, it is associated with a significantly improved prognosis. Of the patient- and treatment-related factors we analyzed, only young age, low baseline cancer antigen 19-9, and gemcitabine as a radiosensitizer were associated with a major pathologic response. Given its association with long-term survival, better predictors of response and more effective preoperative regimens should be aggressively sought.

LEVERCHIRURGIE

RFA geeft geen betere overleving dan leverresectie voor vroegstadium hepatocellulair carcinoom

BACKGROUND

Hepatic resection and radiofrequency ablation (RFA) are treatment options for early-stage hepatocellular carcinoma (HCC). Whether tumour recurrence and long-term survival favour either treatment has not been established. This randomized trial aimed to test the hypothesis that RFA is superior to hepatic resection in terms of lower tumour recurrence rate and better long-term survival.

METHOD

Patients with early-stage HCC (solitary tumour no larger than 5 cm; or no more than 3 tumours, each 3 cm or smaller) were randomized into hepatic resection and RFA groups. Demographic and clinical characteristics, and short- and long-term outcome measures were compared between groups. Primary and secondary outcome measures were overall tumour recurrence and survival respectively.

RESULTS

Clinicopathological data were similar in the two groups, which each contained 109 patients. The RFA group had a shorter treatment duration, less blood loss and shorter hospital stay than the resection group. Mortality and morbidity rates were similar in the two groups. The overall tumour recurrence rate was similar in the resection and RFA groups (71·3 versus 81·7 per cent respectively). The 1-, 3-, 5- and 10-year overall survival rates were 94·5, 80·6, 66·5 and 47·6 per cent respectively in the resection group, compared with 95·4, 82·3, 66·4 and 41·8 per cent in the RFA group (P = 0·531). Corresponding disease-free survival rates were 74·1, 50·9, 41·5 and 31·9 per cent in the resection group, and 70·6, 46·6, 33·6 and 18·6 per cent in the RFA group (P = 0·072).

CONCLUSION

RFA for early-stage HCC is not superior to hepatic resection, in terms of tumour recurrence, overall survival and disease-free survival.

Hoge 'Comprehensive Complication Index' voorspeller voor slechtere kankerspecifieke overleving na resectie van colorectale levermetastases

OBJECTIVE

To investigate prognostic impact of postoperative complications for colorectal liver metastases (CLM) in the era of RAS mutation analysis.

BACKGROUND

Postoperative complications have been associated with cancer-specific outcomes in multiple malignancies.

METHODS

We identified 575 patients with known RAS mutation status who underwent hepatic resection for CLM during 2008 to 2014. Postoperative complications were scored with the comprehensive complication index (CCI), and the neutrophil-to-lymphocyte ratio (NLR) was used as an indicator of systemic inflammation before and after surgery. Survival after resection of CLM was stratified by CCI (high, ≥26.2; low, <26.2).

RESULTS

Eighty-eight patients had high and 487 low CCI. Recurrence-free survival (RFS) and cancer-specific survival (CSS) after hepatic resection were worse in patients with high CCI than in patients with low CCI (RFS at 3 yrs 26% vs. 41%, P = 0.003; CSS at 5 yrs 46% vs. 64%, P = 0.003). High CCI (odds ratio 3.99, P <0.001) was associated with high NLR (>5) 3 months after hepatic resection. Five factors were associated with worse CSS: high CCI [hazard ratio (HR) 1.61, P = 0.022], primary positive node (HR 1.70, P = 0.003), multiple CLM (HR 1.72, P = 0.001), CLM ≥3 cm (HR 1.73, P <0.001), and mutant RAS (HR 2.04, P <0.001). Receiver operating characteristic and area under receiver operating characteristic curves revealed CCI to be a more sensitive, specific, and accurate predictor of RFS and CSS than NLR.

CONCLUSIONS

High CCI is a potent predictor of worse RFS and CSS after resection of CLM. The ramifications of postsurgical complications extend beyond direct influence on patient outcomes to impact cancer-related survival.

BARIATRISCHE CHIRURGIE

Preoperatief Body Mass Index <40 sterke voorspeller voor Body Mass Index <30 na bariatrische chirurgie

IMPORTANCE

Achieving a body mass index (BMI, calculated as weight in kilograms divided by height in meters squared) of less than 30 is an important goal of bariatric surgery, given the increased risk for weight-related morbidity and mortality with a BMI above this threshold.

OBJECTIVE

To identify predictors for achieving a BMI of less than 30 after bariatric surgery.

Design, Setting, and Participants

This retrospective study used data from the Michigan Bariatric Surgery Collaborative, a statewide quality improvement collaborative that uses a prospectively gathered clinical data registry. A total of 27 320 adults undergoing primary bariatric surgery between June 2006 and May 2015 at teaching and nonteaching hospitals in Michigan were included.

EXPOSURE

Bariatric surgery.

MAIN OUTCOMES AND MEASURES

Logistic regression was used to identify predictors for achieving a BMI of less than 30 at 1 year after surgery. Secondary outcome measures included 30-day postoperative complications and 1-year self-reported comorbidity remission.

RESULTS

A total of 9713 patients (36%; mean [SD] age, 46.9 [11.3] years; 16.6% male) achieved a BMI of less than 30 at 1 year after bariatric surgery. A significant predictor for achieving this goal was a preoperative BMI of less than 40 (odds ratio [OR], 12.88; 95% CI, 11.71-14.16; P < .001). Patients who had a sleeve gastrectomy, gastric bypass, or duodenal switch were more likely to achieve a BMI of less than 30 compared with those who underwent adjustable gastric banding (OR, 8.37 [95% CI, 7.44-9.43]; OR, 21.43 [95% CI, 18.98-24.19]; and OR, 82.93 [95% CI, 59.78-115.03], respectively; P < .001). Only 8.5% of patients with a BMI greater than 50 achieved a BMI of less than 30 after bariatric surgery. Patients who achieved a BMI of less than 30 had significantly higher reported rates of medication discontinuation for hyperlipidemia (60.7% vs 43.2%, P < .001), diabetes (insulin: 67.7% vs 50.0%, P < .001; oral medications: 78.5% vs 64.3%, P < .001), and hypertension (54.7% vs 34.6%, P < .001), as well as a significantly higher rate of sleep apnea remission (72.5% vs 49.3%, P < .001) and higher satisfaction rate (92.8% vs 78.0%, P < .001) compared with patients who did not.

CONCLUSIONS AND RELEVANCE

Patients with a preoperative BMI of less than 40 are more likely to achieve a BMI of less than 30 after bariatric surgery and are more likely to experience comorbidity remission. Policies and practice patterns that delay bariatric surgery until the BMI is 50 or greater can result in significantly inferior outcomes.