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Coloproctologie

Laparoscopische resectie beter dan open chirurgie bij parenchymsparende leverresectie van colorectale lever metastasen

Laparoscopic Versus Open Resection for Colorectal Liver Metastases: The OSLO-COMET Randomized Controlled Trial; Fretland et al; Ann Surg 2018; 267 (2); 199-207.
Pubmed ID: 28657937

OBJECTIVE
To perform the first randomized controlled trial to compare laparoscopic and open liver resection.
SUMMARY BACKGROUND DATA
Laparoscopic liver resection is increasingly used for the surgical treatment of liver tumors. However, high-level evidence to conclude that laparoscopic liver resection is superior to open liver resection is lacking.
METHODS
Explanatory, assessor-blinded, single center, randomized superiority trial recruiting patients from Oslo University Hospital, Oslo, Norway from February 2012 to January 2016. A total of 280 patients with resectable liver metastases from colorectal cancer were randomly assigned to undergo laparoscopic (n = 133) or open (n = 147) parenchyma-sparing liver resection. The primary outcome was postoperative complications within 30 days (Accordion grade 2 or higher). Secondary outcomes included cost-effectiveness, postoperative hospital stay, blood loss, operation time, and resection margins.
RESULTS
The postoperative complication rate was 19% in the laparoscopic-surgery group and 31% in the open-surgery group (12 percentage points difference [95% confidence interval 1.67–21.8; P = 0.021]). The postoperative hospital stay was shorter for laparoscopic surgery (53 vs 96 hours, P < 0.001), whereas there were no differences in blood loss, operation time, and resection margins. Mortality at 90 days did not differ significantly from the laparoscopic group (0 patients) to the open group (1 patient). In a 4-month perspective, the costs were equal, whereas patients in the laparoscopic-surgery group gained 0.011 quality-adjusted life years compared to patients in the open-surgery group (P = 0.001).
CONCLUSIONS
In patients undergoing parenchyma-sparing liver resection for colorectal metastases, laparoscopic surgery was associated with significantly less postoperative complications compared to open surgery. Laparoscopic resection was cost-effective compared to open resection with a 67% probability. The rate of free resection margins was the same in both groups. Our results support the continued implementation of laparoscopic liver resection.

Verhoogde kans postoperatieve morbiditeit bij anti-TNF therapie voorafgaand aan Crohn chirurgie

Anti-TNF Therapy Is Associated With an Increased Risk of Postoperative Morbidity After Surgery for Ileocolonic Crohn Disease: Results of a Prospective Nationwide Cohort; Brouquet et al; Ann Surg 2018; 267 (2); 221-228.
Pubmed ID: 29300710

OBJECTIVE
To determine the risk factors of morbidity after surgery for ileocolonic Crohn disease (CD).
SUMMARY BACKGROUND DATA
The risk factors of morbidity after surgery for CD, particularly the role of anti-TNF therapy, remain controversial and have not been evaluated in a large prospective cohort study.
METHODS
From 2013 to 2015, data on 592 consecutive patients who underwent surgery for CD in 19 French specialty centers were collected prospectively. Possible relationships between anti-TNF and postoperative overall morbidity were tested by univariate and multivariate analyses. Because treatment by anti-TNF is possibly dependent on the characteristics of the patients and disease, a propensity score was calculated and introduced in the analyses using adjustment of the inverse probability of treatment-weighted method.
RESULTS
Postoperative mortality, overall and intra-abdominal septic morbidity rates in the entire cohort were 0%, 29.7%, and 8.4%, respectively; 143 (24.1%) patients had received anti-TNF <3 months prior to surgery. In the multivariate analysis, anti-TNF <3 months prior to surgery was identified as an independent risk factor of the overall postoperative morbidity (odds-ratio [OR] =1.99; confidence interval [CI] 95% = 1.17–3.39, P = 0.011), with preoperative hemoglobin <10 g/dL (OR = 4.77; CI 95% = 1.32–17.35, P = 0.017), operative time >180 min (OR = 2.71; CI 95% = 1.54–4.78, P < 0.001) and recurrent CD (OR = 1.99; CI 95% = 1.13–3.36, P = 0.017). After calculating the propensity score and adjustment according to the inverse probability of treatment-weighted method, anti-TNF <3 months prior to surgery remained associated with a higher risk of overall (OR = 2.98; CI 95% = 2.04–4.35, P <0.0001) and intra-abdominal septic postoperative morbidities (OR = 2.22; CI 95% = 1.22–4.04, P = 0.009).
CONCLUSIONS
Preoperative anti-TNF therapy is associated with a higher risk of morbidity after surgery for ileocolonic CD. This information should be considered in the surgical management of these patients, particularly with regard to the preoperative preparation and indication of temporary defunctioning stoma.

UPPER GI

Ziekenhuis van diagnose veel invloed op kans ondergaan curatieve chirurgie bij slokdarmkanker

Hospital of Diagnosis Influences the Probability of Receiving Curative Treatment for Esophageal Cancer; van Putten et al; Ann Surg 2018; 267 (2); 303-310.
Pubmed ID: 27811508

OBJECTIVE
The aim of this article was to study the influence of hospital of diagnosis on the probability of receiving curative treatment and its impact on survival among patients with esophageal cancer (EC).
BACKGROUND

Although EC surgery is centralized in the Netherlands, the disease is often diagnosed in hospitals that do not perform this procedure

METHODS

Patients with potentially curable esophageal or gastroesophageal junction tumors diagnosed between 2005 and 2013 who were potentially curable (cT1-3,X, any N, M0,X) were selected from the Netherlands Cancer Registry. Multilevel logistic regression was performed to examine the probability to undergo curative treatment (resection with or without neoadjuvant treatment, definitive chemoradiotherapy, or local tumor excision) according to hospital of diagnosis. Effects of variation in probability of undergoing curative treatment among these hospitals on survival were investigated by Cox regression.

RESULTS

All 13,017 patients with potentially curable EC, diagnosed in 91 hospitals, were included. The proportion of patients receiving curative treatment ranged from 37% to 83% and from 45% to 86% in the periods 2005–2009 and 2010–2013, respectively, depending on hospital of diagnosis. After adjustment for patient- and hospital-related characteristics these proportions ranged from 41% to 77% and from 50% to 82%, respectively (both $P < 0.001$). Multivariable survival analyses showed that patients diagnosed in hospitals with a low probability of undergoing curative treatment had a worse overall survival (hazard ratio = 1.13, 95% confidence interval 1.06–1.20; hazard ratio = 1.15, 95% confidence interval 1.07–1.24).

CONCLUSION

The variation in probability of undergoing potentially curative treatment for EC between hospitals of diagnosis and its impact on survival indicates that treatment decision making in EC may be improved.

Kwaliteit van leven gelijk na open transhiatale en transthoracale oesophagustumorresectie

Health-related quality of life after open transhiatal and transthoracic oesophagectomy for cancer; Kauppila et al.; BJS 2018; 105 (3); 230-236.

Pubmed ID: 29405281

BACKGROUND

Transhiatal and transthoracic oesophagectomy in patients with oesophageal cancer have similar survival rates. Whether these approaches differ in health-related quality of life (HRQoL) is uncertain and was examined in this study.

METHOD

Patients undergoing transhiatal or transthoracic surgery for lower-third oesophageal or gastro-oesophageal junctional cancer between 2011 and 2015 were selected from an institutional database. HRQoL outcomes were measured at 6 and 12 months after surgery using validated written questionnaires (European Organisation for Research and Treatment of Cancer QLQ-C30 and QLQ-OG25). Linear mixed models provided mean score differences (MSDs) with 95 per cent confidence intervals, adjusted for preoperative HRQoL, age, physical status (ASA fitness grade), tumour location, tumour stage, neoadjuvant therapy, adjuvant therapy and postoperative complications. MSD values of 10 or more were regarded as clinically relevant.

RESULTS

Some 146 patients underwent transhiatal (86, 58·9 per cent) or transthoracic (60, 41·1 per cent) oesophagectomy. The HRQoL questionnaires were returned by 111 patients at 6 months and 74 at 12 months. At 6 months, transthoracic oesophagectomy was associated with worse role function (MSD –12, 95 per cent c.i. –23 to 0; P = 0·046). At 12 months, patients in the transthoracic group had more nausea and vomiting (MSD 11, 0 to 22; P = 0·045), dyspnoea (MSD 13, 1 to 25; P = 0·029) and constipation (MSD 20, 7 to 33; P = 0·003) than those in the transhiatal group.

CONCLUSION

Transhiatal oesophagectomy seems to offer better HRQoL than transthoracic oesophagectomy 6 and 12 months after surgery.

HPB

Aanzienlijk risico op complicaties na chirurgie voor neuroendocrine pancreastumoren

Early and Late Complications After Surgery for MEN1-related Nonfunctioning Pancreatic Neuroendocrine Tumors; Nell et al.; Ann Surg 2018; 267 (2): 352-356.
Pubmed ID: 27811505

OBJECTIVE
To estimate short and long-term morbidity after pancreatic surgery for multiple endocrine neoplasia type 1 (MEN1)-related nonfunctioning pancreatic neuroendocrine tumors (NF-pNETs).
BACKGROUND
Fifty percent of the MEN1 patients harbor multiple NF-pNETs. The decision to proceed to NF-pNET surgery is a balance between the risk of disease progression versus the risk of surgery-related morbidity. Currently, there are insufficient data on the surgical complications after MEN1 NF-pNET surgery.
METHODS
MEN1 patients diagnosed with a NF-pNET who underwent surgery were selected from the DutchMEN1 study group database, including >90% of the Dutch MEN1 population. Early postoperative complications, new-onset diabetes mellitus, and exocrine pancreatic insufficiency were captured.
RESULTS
Sixty-one patients underwent NF-pNET surgery at 1 of the 8 Dutch academic centers. Patients were young (median age 41 years) with low American Society of Anesthesiologists scores. Median NF-pNET size on imaging was 22 mm (3–157). Thirty-three percent (19/58) of the patients developed major early—Clavien-Dindo grade III to IV—complications mainly consisting International Study Group of Pancreatic Surgery grade B/C pancreatic fistulas. Twenty-three percent of the patients (14/61) developed endocrine or exocrine pancreas insufficiency. The development of major early postoperative complications was independent of the NF-pNET tumor size. Twenty-one percent of the patients (12/58) developed multiple major early complications.
CONCLUSIONS
MEN1 NF-pNET surgery is associated with high rates of major short and long-term complications. Current findings should be taken into account in the shared decision-making process when MEN1 NF-pNET surgery is considered.

Keuze voor adjuvant 5-FU of gemcitabine op basis van HuR status: post-hoc analyse ESPAC-3 trial

Cytoplasmic HuR Status Predicts Disease-free Survival in Resected Pancreatic Cancer: A Post-hoc Analysis From the International Phase III ESPAC-3 Clinical Trial; Tatarian et al; Ann Surg 2018; 267 (2); 364-369.
Pubmed ID: 27893535

OBJECTIVES
We tested cytoplasmic HuR (cHuR) as a predictive marker for response to chemotherapy by examining tumor samples from the international European Study Group of Pancreatic Cancer-3 trial, in which patients with resected pancreatic ductal adenocarcinoma (PDA) received either gemcitabine

(GEM) or 5-fluorouracil (5-FU) adjuvant monotherapy.

BACKGROUND

Previous studies have implicated the mRNA-binding protein, HuR (ELAVL1), as a predictive marker for PDA treatment response in the adjuvant setting. These studies were, however, based on small cohorts of patients outside of a clinical trial, or a clinical trial in which patients received multimodality therapy with concomitant radiation.

METHODS

Tissue samples from 379 patients with PDA enrolled in the European Study Group of Pancreatic Cancer-3 trial were immunolabeled with an anti-HuR antibody and scored for cHuR expression. Patients were dichotomized into groups of high versus low cHuR expression.

RESULTS

There was no association between cHuR expression and prognosis in the overall cohort [disease-free survival (DFS), P = 0.44; overall survival, P = 0.41). Median DFS for patients with high cHuR was significantly greater for patients treated with 5-FU compared to GEM [20.1 months, confidence interval (CI): 8.3–36.4 vs 10.9 months, CI: 7.5–14.2; P = 0.04]. Median DFS was similar between the treatment arms in patients with low cHuR (5-FU, 12.8 months, CI: 10.6–14.6 vs GEM, 12.9 months, CI: 11.2–15.4).

CONCLUSION

Patients with high cHuR-expressing tumors may benefit from 5-FU-based adjuvant therapy as compared to GEM, whereas those patients with low cHuR appear to have no survival advantage with GEM compared with 5-FU. Further studies are needed to validate HuR as a biomarker in both future monotherapy and multiagent regimens.

LEVERCHIRURGIE

Adjuvant gemcitabine geeft geen overlevingswinst na resectie van cholangiocarcinoom

Randomized clinical trial of adjuvant gemcitabine chemotherapy versus observation in resected bile duct cancer; Ebeta et al; BJS 2018; 105 (3); 192-202.

Pubmed ID: 29405274

BACKGROUND

Although some retrospective studies have suggested the value of adjuvant therapy, no recommended standard exists in bile duct cancer. The aim of this study was to test the hypothesis that adjuvant gemcitabine chemotherapy would improve survival probability in resected bile duct cancer.

METHOD

This was a randomized phase III trial. Patients with resected bile duct cancer were assigned randomly to gemcitabine and observation groups, which were balanced with respect to lymph node status, residual tumour status and tumour location. Gemcitabine was given intravenously at a dose of 1000 mg/m2, administered on days 1, 8 and 15 every 4 weeks for six cycles. The primary endpoint was overall survival, and secondary endpoints were relapse-free survival, subgroup analysis and toxicity.

RESULTS

Some 225 patients were included (117 gemcitabine, 108 observation). Baseline characteristics were well balanced between the gemcitabine and observation groups. There were no significant differences in overall survival (median 62·3 versus 63·8 months respectively; hazard ratio 1·01, 95 per cent c.i. 0·70 to 1·45; P = 0·964) and relapse-free survival (median 36·0 versus 39·9 months; hazard ratio 0·93, 0·66 to 1·32; P = 0·693). There were no survival differences between the two groups in subsets stratified by lymph node status and margin status. Although haematological toxicity occurred frequently in the gemcitabine group, most toxicities were transient, and grade 3/4 non-

haematological toxicity was rare.
CONCLUSION
The survival probability in patients with resected bile duct cancer was not significantly different between the gemcitabine adjuvant chemotherapy group and the observation group. Registration number: UMIN 000000820

Groter leverrestvolume nodig bij oudere patiënten die major hepatectomie ondergaan

A New Proposal of Criteria for the Future Remnant Liver Volume in Older Patients Undergoing Major Hepatectomy for Biliary Tract Cancer; Watanabe et al; Ann Surg 2018; 267 (2); 338-345. Pubmed ID: 27849659

OBJECTIVE
To evaluate whether advanced age increases the risk of severe complications after major hepatectomy with bile duct resection (BDR) in patients with biliary tract cancer, and to establish new criteria for the percentage of the future remnant liver volume (%FLV) in older patients undergoing this operation.
BACKGROUND
Advanced age is reported to inhibit liver regeneration and suppress immune function; however, little is known about the risk of aging in high-stress surgery, such as biliary tract surgery.
METHODS
Consecutive patients who underwent major hepatectomy with BDR between 2000 and 2013 were retrospectively reviewed. Severe postoperative complications were defined as Clavien-Dindo grade ≥IV.
RESULTS
In 225 patients undergoing major hepatectomy with BDR, advanced age was significantly correlated with the incidence of severe postoperative complications, with cut-off value of 69 years. In comparing postoperative complications, the incidences of hyperbilirubinemia, liver failure, respiratory failure, sepsis, severe complications, and operation-related death were more frequent in the older group. Moreover, advanced age (≥69 years) was an independent risk factor associated with severe complications after major hepatectomy with BDR. Delayed liver regeneration was the reason for the age-related risks. The incidence of severe postoperative complications in older patients was significantly decreased if %FLV was set at ≥45%.
CONCLUSIONS
Advanced age is a strong independent risk factor for severe complications after major hepatectomy with BDR. To decrease the risk of advanced age, the minimum limit of %FLV for this operation should be set at ≥45% in patients aged ≥69 years.

BARIATRISCHE CHIRURGIE

Zorgpad verbetert uitkomsten van chirurgie bij obese patiënt

A perioperative care map improves outcomes in patients with morbid obesity undergoing major surgery; Boodaie et al.; Surgery 2018; 163 (2); 450-456.
Pubmed ID: 29195738

BACKGROUND AND OBJECTIVES

The surgical management of patients with morbid obesity (body mass index ≥ 40) is notable for a relatively high risk of complications. To address this problem, a perioperative care map was developed using precautions and best practices commonly employed in bariatric surgery. It requires additional medical assessments, sleep apnea surveillance, more stringent guidelines for anesthetic management, and readily available bariatric operating room equipment, among other items. This care map was implemented in 2013 at 4 major urban teaching hospitals for use in patients undergoing all types of nonambulatory surgery with a body mass index greater than 40 kg/m2. The impact on patient outcomes was evaluated.

METHODS

The American College of Surgeons National Surgical Quality Improvement Program database was used to compare 30-day outcomes of morbidly obese patients before the year 2013 and after the years 2015 care-map implementation. In addition, trends in 30-day outcomes for morbidly obese patients were compared with those for non-obese patients.

RESULTS

Morbidly obese patients, between 2013 and 2015, saw an adjusted decrease in the rate of unplanned return to the operating room (OR = 0.49; *P* = .039), unplanned readmission (OR = 0.57; *P* = .006), total duration of stay (−0.87 days; *P* = .009), and postoperative duration of stay (−0.69 days; *P* = .007). Of these, total duration of stay (−0.86 days; *P* = .015), and postoperative duration of stay (−0.69 days; *P* = .012) improved significantly more for morbidly obese patients than for nonmorbidly obese patients.

CONCLUSIONS

Outcomes in morbidly obese patients improved from 2013 to 2015. Implementation of a perioperative care map may have contributed to these improvements. The care map should be further investigated and considered for more widespread use.