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Coloproctologie

Goede oncologische uitkomsten van TME met robot

Oncological Outcomes After Robotic Proctectomy for Rectal Cancer: Analysis of a Prospective Database; Sammour et al; Ann Surg 2018; 267 (3); 521-526.

Pubmed ID: 27997470

OBJECTIVE

The aim of this study is to evaluate the oncological outcomes of robotic total mesorectal excision (TME) at an NCI designated cancer center.

SUMMARY BACKGROUND DATA

The effectiveness of laparoscopic TME could not be established, but the robotic-assisted approach may hold some promise, with improved visualization and ergonomics for pelvic dissection. Oncological outcome data is presently lacking.

METHODS

Patients who underwent total mesorectal excision or tumor-specific mesorectal excision for rectal cancer between April 2009 and April 2016 via a robotic approach were identified from a prospective single-institution database. The circumferential resection margin (CRM), distal resection margin, and TME completeness rates were determined. Kaplan–Meier analysis of disease-free survival and overall survival was performed for all patients treated with curative intent.

RESULTS

A total of 276 patients underwent robotic proctectomy during the study period. Robotic surgery was performed initially by 1 surgeon with 3 additional surgeons progressively transitioning from open to robotic during the study period with annual increase in the total number of cases performed robotically. Seven patients had involved circumferential resection margins (2.5%), and there were no positive distal or proximal resection margins. One hundred eighty-six patients had TME quality assessed, and only 1 patient (0.5%) had an incomplete TME. Eighty-three patients were followed up for a minimum of 3 years, with a local recurrence rate of 2.4%, and a distant recurrence rate of 16.9%. Five-year disease-free survival on Kaplan–Meier analysis was 82%, and 5-year overall survival was 87%.

CONCLUSIONS

Robotic proctectomy for rectal cancer can be performed with good short and medium term oncological outcomes in selected patients.

ESD meer kosteneffectief dan laparoscopische segmentale resectie voor goedaardige colorectale poliepen

Management of the colorectal polyp referred for resection: A case-matched comparison of advanced endoscopic surgery and laparoscopic colectomy ; Gamaleldin et al; Surgery 2018; 163 (3); 522-527.

Pubmed ID: 29361367

BACKGROUND AND OBJECTIVE

Colonoscopy is the gold standard for colorectal screening and surveillance. Advanced endoscopic polypectomy techniques such as endoscopic submucosal dissection (ESD) have been introduced to remove large colorectal polyps. Our aim was to compare the outcomes of patients who underwent ESD with those of who underwent laparoscopic colectomy for benign colorectal polyps.

METHODS

Patients with a preoperative diagnosis of benign colorectal polyp who underwent ESD or colectomy between 2011 and 2016 were case matched for age, sex, body mass index, American Society of Anesthesiologists status, polyp size, and location. Outcomes and cost data were analyzed. Polyps proximal to the splenic flexure were grouped as right-sided polyps, and polyps distal to the splenic flexure were grouped as left-sided polyps.

RESULTS

We identified 144 patients in the laparoscopic resection group and 111 patients in the ESD group; 48 patients met the matching criteria. Of the 48 patients in the ESD group, 5 required operative resection. Mean duration of stay in laparoscopic resection group and the ESD group was 5.2 ± 2.4 days vs 1.5 ± 1.4 ($P < .001$). Mean operative time was no different (136 ± 45 vs 133 ± 72.7 minutes, respectively). Six patients had follow-up colonoscopy within a year in the laparoscopic resection group versus 22 patients in the ESD group. The laparoscopic group had 21% complication rate versus 15% for the ESD group ($P > .05$). ESD had a 43% cost-reduction advantage over laparoscopic colectomy, with a 44% and 39% cost advantage for right- and left-sided lesions, respectively.

CONCLUSION

ESD is more cost effective than conventional segmental resection. With an experienced endoscopist, ESD can be offered as a colon-preserving procedure.

UPPER GI

Moeilijkheden met eten van invloed op kwaliteit van leven tot 10 jaar na oesophagustumorresectie

Impact of weight loss and eating difficulties on health-related quality of life up to 10 years after oesophagectomy for cancer; Anandavadivelan et al; BJS 2018; 105 (4); 410-418.

Pubmed ID: 29160918

BACKGROUND

Severe weight loss is experienced by patients with eating difficulties after surgery for oesophageal cancer. The aim of this prospective cohort study was to assess the influence of eating difficulties and severe weight loss on health-related quality of life (HRQoL) up to 10 years after oesophagectomy.

METHODS

Data on bodyweight and HRQoL were collected at 6 months, 3, 5 and 10 years in patients who underwent surgery for oesophageal cancer in Sweden between 2001 and 2005. Exposures were percentage weight loss, and eating difficulties defined by the European Organisation for Research and Treatment of Cancer (EORTC) QLQ-OES18 questionnaire. Outcomes were HRQoL scores from the EORTC QLQ-C30 questionnaire. Repeated-measures ANOVA, adjusting for potential confounders,

was used to assess the association between eating difficulties and weight loss (4 exposure groups) and HRQoL scores at each time point. Mean score differences (MDs) between time points or exposure groups were defined as clinically relevant in accordance with evidence-based interpretation guidelines.

RESULTS

In total, 92 of 104 10-year survivors (88.5 per cent) responded to the questionnaires. Weight loss was greatest within 6 months of surgery. Patients with eating difficulties with or without weight loss reported clinically and statistically significantly worsened HRQoL in almost all aspects. The largest MD was seen between 5 and 10 years after surgery for global quality of life, physical, role and social function (MD -22 to -30), as well for fatigue, nausea, dyspnoea, insomnia, appetite loss and diarrhoea (MD 24-36).

CONCLUSION

Eating difficulties are associated with deterioration in several aspects of HRQoL up to 10 years after surgery for oesophageal cancer.

Directe orale voeding na laparoscopische transthoracale oesophagectomie niet inferieur tov 7 dagen niets per os

*Early Oral Feeding Following McKeown Minimally Invasive Esophagectomy: An Open-label, Randomized, Controlled, Noninferiority Trial; Sun et al.; Ann Surg 2018; 267 (3); 435-442.
Pubmed ID: 28549015*

OBJECTIVE

Our objective was to evaluate the impact of early oral feeding (EOF) on postoperative cardiac, respiratory, and gastrointestinal (CRG) complications after McKeown minimally invasive esophagectomy for esophageal cancer.

SUMMARY BACKGROUND DATA

Nil-by-mouth with enteral tube feeding is routinely practiced after esophagectomy.

METHOD

Patients were randomly allocated to receive oral feeding on the first postoperative day (EOF group) or late oral feeding (LOF group) 7 days after surgery. The primary endpoint was the occurrence of postoperative CRG complications, and the secondary outcomes included bowel function recovery and short-term quality of life (QOL).

RESULTS

Between February 2014 and October 2015, 280 patients were enrolled in this study. There were 140 patients in the EOF group and 140 patients in the LOF group. EOF was noninferior to LOF for CRG complications (30.0% in the EOF group vs. 32.9% in the LOF group; 95% confidence interval of the difference: -13.8% to 8.0%). Compared with the LOF group, the EOF group showed significantly shorter time to first flatus (median of 2 days vs. 3 days, $P = 0.001$) and bowel movement (median of 3 vs. 4 days, $P < 0.001$). Two weeks after the operation, patients in the EOF group reported higher global QOL and function scores and lower symptom scores than patients in the LOF group.

CONCLUSION

In patients after McKeown minimally invasive esophagectomy is noninferior to the standard of care with regard to postoperative CRG complications. In addition, patients in the EOF group had a quicker recovery of bowel function and improved short-term QOL.

HPB

Hogere postoperatieve mortaliteit na laparoscopische Whipple in laag volume ziekenhuizen

Open Pancreaticoduodenectomy Case Volume Predicts Outcome of Laparoscopic Approach: A Population-based Analysis; Kutlu et al.; Ann Surg 2018; 267 (3): 552-560.

Pubmed ID: 28045744

OBJECTIVE

To determine if laparoscopic pancreaticoduodenectomy (LPD) is safe and offers benefits over open pancreaticoduodenectomy (OPD) at institutions with lower pancreaticoduodenectomy (PD) volume.

BACKGROUND

Although a hospital-based case volume-outcome relationship for morbidity, mortality, and oncologic quality has been reported for OPD, comparative trends for LPD have yet to be investigated..

METHODS

A total of 4739 patients with complete data were identified in National Cancer Data Base between 2010 and 2011; 4309 patients had OPD and 430 patients had LPD. Institutions were categorized into quartiles based on PD case volume. For the entire cohort and within each quartile, LPD and OPD were compared for 30-day and 90-day mortality, length of hospital stay, 30-day unplanned readmission rate, and margin status. Binary logistic regression, linear regression, and propensity score matching was performed.

RESULTS

Hospitals with low PD case volume (≤ 25 PDs per year; 91% of all hospitals in the US and 25% of cases) had the highest 30- and 90-day mortality, highest margin positivity rates, and lowest lymph node counts. These trends were more pronounced in the LPD group. Only in the highest-volume hospitals was LPD associated with shorter hospital stay and lower readmission compared with OPD.

CONCLUSIONS

These findings confirm that risks of postoperative mortality and suboptimal oncologic surgical quality following PD are higher in low-volume hospitals. Furthermore, these risks are more profound with LPD compared with OPD. These data suggest that the putative benefits of LPD are unlikely to be observed in institutions performing ≤ 25 PDs per year.

Betere patiëntuitkomsten en lagere kosten door implementatie klinisch zorgpad na Whipple

Implementation of prospective, surgeon-driven, risk-based pathway for pancreatoduodenectomy results in improved clinical outcomes and first year cost savings of \$1 million; Shubert et al; Surgery 2018; 163 (3); 495-502.

Pubmed ID: 29275974

BACKGROUND AND OBJECTIVE

Morbidity and costs after pancreatoduodenectomy remain increased, driven by postoperative pancreatic fistula (POPF). A risk-based pathway for pancreatoduodenectomy (RBP-PD) was implemented and the clinical and cost outcomes compared with that of our historic practice.

METHODS

Prospective clinical and cost outcomes for our RBP-PD cohort treated from September 2014 to September 2015 were compared with a previously published cohort of pancreatoduodenectomies from January 2007 to February 2014.

RESULTS

A total of 128 RBP-PD cases were compared with 808 historic controls. Apart from less blood loss, there were no significant clinical differences between the 2 groups. Overall POPF rate did not change. Average duration of stay decreased to 10 days from 12 ($P < .001$) despite similar readmission rates. Postsurgical interventional radiology procedures decreased to 18.0% from 26.4% ($P = .048$). Utilization of and duration of stay in monitored care decreased to 23.4% from 35.6% ($P < .01$) and to

1 day from 3 ($P < .01$). On multivariable analysis RBP-PD was independently associated with decreased odds of higher postoperative pancreatic fistula grade, monitored care, and prolonged duration of stay. Inpatient cost of care decreased \$6,387 per patient (-11.1% , $P = .016$), and total 30-day costs decreased \$8,565 per patient (-13.7% , $P = .01$), representing a total 30-day cost savings of \$1.1 million.

CONCLUSION

RBP-PD significantly improved patient outcomes, decreased costs of care, and likely has applicability for surgical care beyond pancreatoduodenectomy.

LEVERCHIRURGIE

Dóór gebruiken van aspirine geen verhoogde kans op bloeding na electieve hepatectomie

Use of aspirin and bleeding-related complications after hepatic resection; Gelli et al; BJS 2018; 105 (4); 429-438.

Pubmed ID: 29412449

BACKGROUND

The operative risk of hepatectomy under antiplatelet therapy is unknown. This study sought to assess the outcomes of elective hepatectomy performed with or without aspirin continuation in a well balanced matched cohort.

METHOD

Data were retrieved from a multicentre prospective observational study. Aspirin and control groups were compared by non-standardized methods and by propensity score (PS) matching analysis. The main outcome was severe (Dindo–Clavien grade IIIa or more) haemorrhage. Other outcomes analysed were intraoperative transfusion, overall haemorrhage, major morbidity, comprehensive complication index (CCI) score, thromboembolic complications, ischaemic complications and mortality.

RESULTS

Before matching, there were 118 patients in the aspirin group and 1685 in the control group. ASA fitness grade, cardiovascular disease, previous history of angina pectoris, angioplasty, diabetes, use of vitamin K antagonists, cirrhosis and type of hepatectomy were significantly different between the groups. After PS matching, 108 patients were included in each group. There were no statistically significant differences between the aspirin and control groups in severe haemorrhage (6.5 versus 5.6 per cent respectively; odds ratio (OR) 1.18, 95 per cent c.i. 0.38 to 3.62), intraoperative transfusion (23.4 versus 23.7 per cent; OR 0.98, 0.51 to 1.87), overall haemorrhage (10.2 versus 12.0 per cent; OR 0.83, 0.35 to 1.94), CCI score (24 versus 28; $P = 0.520$), major complications (23.1 versus 13.9 per cent; OR 1.82, 0.92 to 3.79) and 90-day mortality (5.6 versus 4.6 per cent; OR 1.21, 0.36 to 4.09).

CONCLUSION

This observational study suggested that aspirin continuation is not associated with a higher rate of bleeding-related complications after elective hepatic surgery.

Benchmarking in levertransplantaties

Defining Benchmarks in Liver Transplantation: A Multicenter Outcome Analysis Determining Best Achievable Results; Muller et al; Ann Surg 2018; 267 (3); 419-325.

Pubmed ID: 28885508

OBJECTIVE

To propose benchmark outcome values in liver transplantation, serving as reference for assessing individual patients or any other patient groups.

BACKGROUND

Best achievable results in liver transplantation, that is, benchmarks, are unknown. Consequently, outcome comparisons within or across centers over time remain speculative.

METHODS

Out of 7492 liver transplantation performed in 17 international centers from 3 continents, we identified 2024 low risk adult cases with a laboratory model for end-stage liver disease score ≤ 20 points, a balance of risk score ≤ 9 , and receiving a primary graft by donation after brain death. We chose clinically relevant endpoints covering intra- and postoperative course, with a focus on complications graded by severity including the complication comprehensive index (CCI[®]). Respective benchmarks were derived from the median value in each center, and the 75 percentile was considered the benchmark cutoff.

RESULTS

Benchmark cases represented 8% to 49% of cases per center. One-year patient-survival was 91.6% with 3.5% retransplantations. Eighty-two percent of patients developed at least 1 complication during 1-year follow-up. Biliary complications occurred in one-fifth of the patients up to 6 months after surgery. Benchmark cutoffs were ≤ 4 days for ICU stay, ≤ 18 days for hospital stay, $\leq 59\%$ for patients with severe complications (\geq Grade III) and ≤ 42.1 for 1-year CCI[®]. Comparisons with the next higher risk group (model for end stage liver disease 21–30) disclosed an increase in morbidity but within benchmark cutoffs for most, but not all indicators, while in patients receiving a second graft from 1 center (n = 50) outcome values were all outside of benchmark values.

CONCLUSIONS

Despite excellent 1-year survival, morbidity in benchmark cases remains high with half of patients developing severe complications during 1-year follow-up. Benchmark cutoffs targeting morbidity parameters offer a valid tool to assess higher risk groups.

BARIATRISCHE CHIRURGIE

500 Roux-en-Y gastric-bypass ingrepen nodig voor bereiken plateau

Mastery in Bariatric Surgery: The Long-term Surgeon Learning Curve of Roux-en-Y Gastric Bypass; Doumouras et al.; Ann Surg 2018; 267 (3); 489-494.

Pubmed ID: 28230663

OBJECTIVE

To determine the effect of cumulative volume on all-cause morbidity and operative time.

BACKGROUND

Gastric bypass is an important public health procedure, but it is difficult to master with little data about how surgeon cumulative volume affects outcomes longitudinally.

METHODS

This was a longitudinal study of 29 surgeons during the first 6 years of performing bariatric surgery in a high-volume, regionalized center of excellence system. Cumulative volume was determined using date and time of the procedure. Cumulative volume was analyzed in blocks of 75 cases. The main outcome of interest was all-cause morbidity during the index admission and the secondary outcome was operative time.

RESULTS

Overall, 11,684 gastric bypasses were performed by 29 surgeons at 9 centers of excellence. The overall morbidity rate was 10.1% and short-term outcomes were related significantly to cumulative volume. Perioperative risk plateaued after approximately 500 cases and was lowest for surgeons who

had completed more than 600 cases (odds ratio 0.53 95% confidence interval 0.26–0.96 $P = 0.04$) compared to the first 75 cases. Operative time also stabilized after approximately 500 cases, with an operative time 44.7 minutes faster than surgeons in their first 75 cases (95% confidence interval 37.0–52.4 min $P < 0.001$).

CONCLUSIONS

The present study demonstrated the clear, substantial influence of surgeon cumulative volume on improved perioperative outcomes and operative time. This finding emphasizes role of the individual surgeon in perioperative outcomes and that the true learning curve needed to master a complex surgical procedure such as gastric bypass is longer than previously thought, in this case requiring approximately 500 cases to plateau.

Patiënt karakteristieken meer van invloed op uitkomsten na sleeve gastrectomie dan chirurgische techniek

What matters after sleeve gastrectomy: patient characteristics or surgical technique?; Dhar et al.; Surgery 2018; 163 (3); 571-577.

Pubmed ID: 29398036

BACKGROUND AND OBJECTIVE

The impact of operative technique on outcomes in laparoscopic sleeve gastrectomy has been explored previously; however, the relative importance of patient characteristics remains unknown. Our aim was to characterize national variability in operative technique for laparoscopic sleeve gastrectomy and determine whether patient-specific factors are more critical to predicting outcomes.

METHODS

We queried the database of the Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program for laparoscopic sleeve gastrectomies performed in 2015 ($n = 88,845$). Logistic regression models were used to determine predictors of postoperative outcomes.

RESULTS

2015, >460 variations of laparoscopic sleeve gastrectomy were performed based on combinations of bougie size, distance from the pylorus, use of staple line reinforcement, and oversewing of the staple line. Despite such substantial variability, technique variants were not predictive of outcomes, including perioperative morbidity, leak, or bleeding (all $P \geq .05$). Instead, preoperative patient characteristics were found to be more predictive of these outcomes after laparoscopic sleeve gastrectomy. Only history of gastroesophageal disease (odds ratio 1.44, 95% confidence interval 1.08–1.91, $P < .01$) was associated with leak.

CONCLUSIONS

Considerable variability exists in technique among surgeons nationally, but patient characteristics are more predictive of adverse outcomes after laparoscopic sleeve gastrectomy. Bundled payments and reimbursement policies should account for patient-specific factors in addition to current accreditation and volume thresholds when deciding risk-adjustment strategies.