Please find below the results of your literature search request.

If you would like the full text of any of the abstracts included, or would like a further search completed on this topic, please let us know.

We’d appreciate feedback on your satisfaction with this literature search. Please visit http://www.hello.nhs.uk/literature_search_feedback.asp and complete the form.

Thank you

**Literature search results**

<table>
<thead>
<tr>
<th>Search completed for:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Search required by:</td>
<td>28th January 2012</td>
</tr>
<tr>
<td>Search completed on:</td>
<td>27th January 2012</td>
</tr>
<tr>
<td>Search completed by:</td>
<td>Richard Bridgen</td>
</tr>
</tbody>
</table>

**Search details**

Enhanced recovery for upper gastrointestinal surgery including systematic reviews, clinical trials and case studies.

**Resources searched**

NHS Evidence; TRIP Database; Cochrane Library; CINAHL; EMBASE; MEDLINE; Google Scholar

**Database search terms** : “enhanced recovery”; enhance* adj2 recovery; ERAS; ERP; “fast track” adj2 surg*; accelerat* adj2 recovery; CONVALESCENCE; recovery, ARP; convalescence; postoperative* adj2 care; POSTOPERATIVE CARE; accelerat*; enhance*; “fast track”; quick*; rapid*; speed*; fast*; “upper GI”; “upper gastro*”; stomach; STOMACH; oesophagus; exp ESOPHAGUS; esophagus; duodenum; exp DUODENUM; exp UPPER GASTROINTESTINAL TRACT; surg*; operat*; procedure*; GERAL SURGERY; DIGESTIVE SYSTEM SURGICAL PROCEDURES;; exp GASTROENTEROSTOMY; exp ETEROSTOMY; excisi*; reduc*; decreas*; diminish*; shorten*; lessen; “length of stay”; hospital*; orifice

**Google search string** : (“enhanced recovery” OR “accelerated recovery” OR ERAS OR ERP OR ARP OR “fast track”) gastrectomy 2000..2012

**Summary**

There is a great deal of research into fast track surgery or enhanced recovery for gastrectomy. I have included research on perioperative care as well as the surgery itself, as this may also have an impact on the speed of recovery. I have also included research on techniques which may promote recovery and reduce length of stay.

**Guidelines**

British Society of Gastroenterologists
Guidelines for the Management of Oesophageal and Gastric Cancer 2011

1. Following a period of preoptimisation, a reduction in mortality and length of hospital stay was reported, with preoperative fluid loading considered the most important factor.93

2. Studies in malnourished patients included use of both preoperative and postoperative immunonutrition and it may be that this group of patients require immunonutrition both preoperatively and postoperatively to gain benefit. Its use may also reduce length of hospital stay96,100

Evidence-based reviews

Cochrane Database of Systematic Reviews

Abdominal drainage versus no drainage post gastrectomy for gastric cancer 2011

The overall quality of the evidence according to the GRADE approach was “Very Low” for mortality and re-operations, and “Low” for post-operative complications, operation time, and post-operative length of stay.

Transverse verses midline incisions for abdominal surgery 2011

However, the lower pain and reduced effect on pulmonary function were not translated into other clinical advantages as recovery times and other complication rates (except cosmetic appearance) were similar.

Prophylactic nasogastric decompression after abdominal surgery 2010

This systematic review of 37 trials showed that routine use of nasogastric tube decompression after abdominal operations, rather than speeding recovery, may slow recovery down and increase the risk of some postoperative complications. On the other hand routine use may decrease the risk of wound infection and subsequent ventral hernia.

Database of Abstracts of Reviews of Effects

Meta-analysis of laparoscopic and open distal gastrectomy for gastric carcinoma 2011

There were no significant differences between types of operation for the following outcomes: time to commencement of oral intake, length of hospital stay, rate of complications, mortality rate, and tumour recurrence (all included four trials). The time to commencement of oral intake and length of hospital stay outcomes were found to have statistically significant tests for heterogeneity.

Laparoscopic assisted distal gastrectomy for early gastric cancer: is it an alternative to the open approach? 2010

The use of laparoscopically-assisted distal gastrectomy was a safe technical alternative to open distal gastrectomy in patients with early gastric cancer; it was associated with enhanced post-operative recovery and fewer complications. However, a higher number of lymph nodes were extracted with the open procedures. Data on the quality of life, cost effectiveness and survival are required to ascertain the long-term oncological value of laparoscopic-assisted distal gastrectomy in this group of patients.

Pouch vs no pouch following total gastrectomy: meta-analysis and systematic review 2010

There was no evidence that pouch formation increased morbidity, mortality, operating time or hospital stay (upper 95% CI <1.0 OR and <0.0 WMD).

Meta-analysis of intravenous lidocaine and postoperative recovery after abdominal surgery 2008

Continuous intravenous administration of lidocaine during and after abdominal surgery improved patient rehabilitation (reduced postoperative ileus, the severity of pain, nausea and vomiting) and shortened hospital stay.

Meta-analysis of short-term outcomes after laparoscopy-assisted distal gastrectomy 2008

Compared with CODG, LADG is associated with lower morbidity, less pain, faster bowel
function recovery and a shorter hospital stay when used to treat early gastric cancer.

Meta-analysis of the need for nasogastric or nasojejunal decompression after gastrectomy for gastric cancer 2008

Routine decompression appeared to be unnecessary, as evidence was lacking that nasogastric or nasojejunal decompression was associated with earlier recovery of bowel function, shorter hospital stay, reduced anastomotic leakage and fewer pulmonary complications after gastrectomy for gastric cancer.

NHS Economic Evaluation Database

Comparative experience of open and minimally invasive esophagogastric resection 2010

The clinical endpoints were broadly similar between the groups. Slight, statistically significant differences were found in the operating time (266 minutes with transthoracic and 442 minutes with minimally invasive surgery), and in-patient days (10 days with transthoracic and 12 days with minimally invasive).

Clinical significance of a standardized clinical pathway in gastrectomy patients 2003

The CP helped to reduce the length of patients’ hospital stay and intensive care monitoring. It also promoted patients to ambulate with assistance and take liquid meals earlier.

Clinical outcome of proximal versus total gastrectomy for proximal gastric cancer 2002

Hospital stay was significantly less for the gastric tube group (31.7 +/- 6.6 days) than for the jejunum group (46.1 +/- 13.3 days), (p<0.01), or the total gastrectomy group (41.3 +/- 15.5 days), (p<0.01).

Published research

1. Prospective multicentre randomised controlled trial of early enteral nutrition for patients undergoing major upper gastrointestinal surgical resection.

Author(s): Barlow R, Price P, Reid TD, Hunt S, Clark GW, Havard TJ, Puntis MC, Lewis WG

Citation: Clinical Nutrition, October 2011, vol./is. 30/5(560-6), 0261-5614;1532-1983 (2011 Oct)

Publication Date: October 2011

Abstract: BACKGROUND & AIMS: The evidence in support of Early Enteral Nutrition (EEN) after upper gastrointestinal surgery is inconclusive. The aim of this study was to determine if EEN improved clinical outcomes and shortened length of hospital stay.METHODS: Open, prospective multicentre randomised controlled trial within a regional UK Cancer Network. One hundred and twenty-one patients with suspected operable upper gastrointestinal cancer (54 oesophageal, 38 gastric, 29 pancreatic) were studied. Patients were randomised to receive EEN (n = 64) or Control management postoperatively (nil by mouth and IV fluid, n = 57). Analysis was based on intention-to-treat and the primary outcome measure was length of hospital stay.RESULTS: Operative morbidity was less common after EEN (32.8%) than Control management (50.9%, p = 0.044), due to fewer wound infections (p = 0.017), chest infections (p = 0.036) and anastomotic leaks (p = 0.055). Median length of hospital stay was 16 days (IQ = 9) after EEN compared with 19 (IQ = 11) days after Control management (p = 0.023).CONCLUSIONS: EEN was associated with significantly shortened length of hospital stay and improved clinical outcomes. These findings reinforce the potential benefit of early oral nutrition in principle and as championed within enhanced recovery after surgery programmes, and such strategies deserve further research in the arena of upper GI surgery. Copyright Copyright 2011 Elsevier Ltd and European Society for Clinical Nutrition and Metabolism. All rights reserved.

Source: MEDLINE

2. Early experience with laparoscopic Roux-en-Y gastric bypass and sleeve


Abstract: Objective: To evaluate the early outcome for laparoscopic Roux-en-Y gastric bypass and laparoscopic sleeve gastrectomy in a new bariatric surgical program in Singapore Methods: A prospective pilot study of 50 patients who underwent laparoscopic Roux-en-Y gastric bypass and laparoscopic sleeve gastrectomy for obesity by a single surgeon at Singapore General Hospital between September 2008 to October 2010. The study endpoint included operative time, complications and hospital length of stay. Patient's interval weight loss and HbA1c levels were recorded. Results: Twenty males and 30 females with median age of 39 years (range 30 to 60) were included in the study. Mean pre-operative weight was 125.5 kg (range 74 kg to 170.7 kg) with a mean pre-operative BMI of 45.98 kg/m² (range 35.4 to 70). Most of our patients had diabetes or impaired glucose tolerance. In addition to diabetes, 45 out of 50 patients had at least one other significant medical co-morbidity related to obesity. The median operative time was 325 minutes for laparoscopic Roux-en-Y gastric bypass and mean operative time for Laparoscopic sleeve gastrectomy was 142 minutes. There was no conversion. One patient required a re-operation for anastomotic leak in gastric bypass group and one patient for bleeding from staple line in sleeve gastrectomy group. Median hospital stay was 4 days (range 1 to 13) for Roux-en-Y gastric bypass and 3 days for sleeve gastrectomy (range 1 to 9). Body Mass Index at 2-week, 1-month, 3-month and 6-month post-operatively was 38.6 kg/m², 37.8 kg/m², 34.5 kg/m² and 30.8 kg/m²; a percentage of excess weight loss of 17.7%, 23.3%, 40.9% and 56.7% was achieved respectively. The median pre-operative HbA1c was 8.6% (range 6.5 to 12.3) and at one month, HbA1c levels reduced to 6.1% for those with Type II diabetes mellitus (range 5.2 to 8). Conclusions: Laparoscopic bariatric surgery especially Roux-en-Y gastric bypass is a technically challenging procedure that can be safely integrated into a bariatric treatment program with early weight loss and improved diabetic control. With more experience, operative time and length of stay decreased.

Source: EMBASE

3. Integrated care pathway and post-operative enhanced recovery: Impact on the management of bariatric surgery patients

Abstract: Background: In April 2010, our institution established an Integrated Care Pathway (ICP) and post-operative Enhanced Recovery Area (ERA) in the management of patients undergoing bariatric surgery. This audit aimed to assess the effect that the introduction of ICP and ERA had on service performance, length of hospital stay and post-operative outcomes in laparoscopic gastric bypass (LRYGB) and sleeve gastrectomy (LSG) surgeries. Methods: Data was collected retrospectively from electronic and written patient records using a pre-devised proforma. All patients who underwent LRYGB and LSG in the same 6-month period (1st May to 31st October) before and after the introduction of ICP and ERA were included. Data was analysed by two individuals and subsequently cross-validated. Results: The number of procedures undertaken during the same 6-month period, before and after the introduction of ICP and ERA, increased from 38 to 83. Mean age, body mass index and sex distribution were similar between the two groups. Dissemination of the OS-MRS showed no significant differences between the 2009 (61.4% low risk; 37.3% moderate risk; 1.2% high risk) and 2010 (57.8% low risk; 39.5% moderate risk; 2.6% high risk) cohorts. Following introduction of the ERA there was a significant reduction in median length of stay from 4 [2-61] to 3 [2-14] days (p<0.01). Patients requiring post-operative HDU/ICU admission decreased from 95.1 % to 19.3% (p<0.001). A 7% decrease in overall post-operative complication rate was observed. An increase in the 30-day re-admission rate was observed in the 2010 cohort; however of all 8 cases none were secondary to major complications. There were no mortalities in both groups. Conclusions: Implementation of the ICP and ERA has led to a 2-fold increase in the number of LRYGB procedures.
and LSG procedures being carried out at our tertiary centre for bariatric surgery and a significant reduction in hospital length of stay. Demand on HDU/ICU has been significantly decreased. Despite an increase in case load and similar patient-related operative risks we found a reduction in post-operative complication rate. Through continuing use of the ICP and ERA we aim to establish a gold-standard for post-operative care in LRYGB and LSG surgeries which ultimately is expected to enhance quality of care, resource utilisation and costeffectiveness of bariatric surgery.

Source: EMBASE

4. [Safe practice of oral rehydration therapy by oral rehydration solution and carbohydrate loading--evaluation by non-invasive gastric echo examination].

Author(s): Sakurai Y, Uchida M, Aiba J, Mimura F, Yamaguchi M

Citation: Masui - Japanese Journal of Anesthesiology, July 2011, vol./is. 60/7(790-8), 0021-4892;0021-4892 (2011 Jul)

Publication Date: July 2011

Abstract: Many anesthesiologists are reluctant to depart from their traditional long fasting periods, even though many guidelines recommend that oral intake of clear fluids administered up to 2-3 hours prior to general anesthesia does not adversely affect the gastric contents. It also indicates that the application of these guidelines does not affect the incidence of pulmonary aspiration. One of the reasons why they have not changed their practices is that they wonder whether it is safe to administer clear fluids as recommended in the guidelines. In this review, we emphasize that oral rehydration therapy using clear fluids (such as OS-1, water and carbohydrate-rich beverage) is safe based on the non-invasive gastric echo examinations as many guidelines have already indicated. Oral rehydration therapy should be considered not only as an alternative to intravenous therapy for preoperative fluid and electrolyte management but also as one of the important modalities which can enhance the recovery of surgical patients.

Source: MEDLINE

5. Effect of early oral feeding after gastric cancer surgery: A result of randomized clinical trial

Author(s): Hur H., Kim S.G., Shim J.H., Song K.Y., Kim W., Park C.H., Jeon H.M.

Citation: Surgery, April 2011, vol./is. 149/4(561-568), 0039-6060 (April 2011)

Publication Date: April 2011

Abstract: Background: To date, early oral feeding after gastrectomy for gastric cancer has not been accepted universally. Therefore, we performed a randomized clinical trial to determine whether early oral feeding after curative surgery for gastric cancer can be tolerated and whether it has an effect on recovery. Methods: From July 2008 to February 2009, 58 patients were enrolled and 4 were excluded according to set criteria. The patients in the early feeding group began a liquid diet on the second postoperative day, and then were fed a soft diet from the third day until the day they were discharged. The patients in the control group began a liquid diet on the fourth day. The primary endpoint of this study was the duration of postoperative hospitalization. Results: No significant differences were found in the clinico-operative characteristics between the 2 groups. The duration of hospitalization (P = .044) and time until flatus (P = .036) in the early group were decreased significantly. With regard to the rates of morbidity, cost of hospitalization, postoperative symptoms, and pain scales, no significant differences were found. The quality of life scores were decreased significantly at the fatigue (P = .007) and nausea and vomiting (P = .048) immediately after operation in the early feeding group. Conclusion: Early oral feeding after gastric cancer surgery is feasible and can result in shorter hospitalization and improvements in several aspects of quality of life in the early postoperative period. 2011 Mosby, Inc. All rights reserved.

Source: EMBASE

6. Laparoscopic treatment of subepithelial gastric lesions in an enhanced recovery programme: A prospective study
Abstract: Introduction: Gastric subepithelial lesions are frequent incidental findings on upper endoscopy, and potentially-malignant lesions warrant surgical resection. The laparoscopic approach to many surgical procedures is associated with less pain and organ dysfunction than open surgery. Similarly, enhanced peri-operative recovery programmes (so-called fast-track methodology) have also led to reduced morbidity and shorter hospital stays. The combined use of these approaches has the potential to reduce perioperative morbidity, however this is poorly investigated in gastric surgery. The aim of the current study is to assess the impact of a structured protocol for preoperative assessment, laparoscopic technique and fast-track postoperative regimen on clinical outcomes in the treatment of subepithelial gastric lesions. Methods: A prospective study was conducted of 16 consecutive patients (10 female, median age 61 (44-78), median ASA class 2 (1-3), who underwent laparoscopic gastric resection of subepithelial lesions at a single academic institution. All lesions were assessed using endoscopy, computerized tomography gastroscopy (CTG) and, in selected patients, endoscopic ultrasound (EUS). Vascular mapping and lesion localization by CTG was used to plan surgical resection, and patients underwent laparoscopic resection combined with a validated fast-track peri-operative protocol (early oral intake, no drains or nasogastric tubes, no epidural analgesia, < 24 hour use of urinary catheters and planned discharge 48 hours postoperatively). Outcomes included length of hospital stay, peri-operative complications, readmission rate, and 30-day mortality. Results: For surgical planning, the surgeon rated CTG imaging extremely useful for localizing laparoscopically-invisible tumors, assessing the anatomical relations to the esophagogastric junction or pylorus, and planning localized versus extensive resection. Final pathology demonstrated gastrointestinal stromal tumors (GISTs) (10), schwannoma (2), ectopic pancreas (3), and Castleman's disease (1). Surgical procedures performed included gastric wedge resection (12), distal gastrectomy (2), total gastrectomy (1), and sleeve gastrectomy as part of a concurrent bariatric procedure (1). The median length of stay was 2.5 days (2-7). Re-admission was required for only one patient who had undergone concurrent paraesophageal hernia repair and experienced severe post-operative esophatitis. No patients required reoperation and 30-day mortality was zero. Conclusions: Laparoscopic surgical resection and peri-operative management with a fast-track protocol should be used to expedite recovery and minimize complications in patients with gastric subepithelial lesions.

Source: EMBASE

7. Management of diabetic gastroparesis

Author(s): Aljarallah B.M.

Abstract: Symptoms suggestive of gastroparesis occur in 5% to 12% of patients with diabetes. Such a complication can affect both prognosis and management of the diabetes; therefore, practicing clinicians are challenged by the complex management of such cases. Gastroparesis is a disorder characterized by a delay in gastric emptying after a meal in the absence of a mechanical gastric outlet obstruction. This article is an evidence-based overview of current management strategies for diabetic gastroparesis. The cardinal symptoms of diabetic gastroparesis are nausea and vomiting. Gastroesophageal scintiscanning at 15-minute intervals for 4 hours after food intake is considered the gold standard for measuring gastric emptying. Retention of more than 10% of the meal after 4 hours is considered an abnormal result, for which a multidisciplinary management approach is required. Treatment should be tailored according to the severity of gastroparesis, and 25% to 68% of symptoms are controlled by prokinetic agents. Commonly prescribed prokinetics include metoclopramide, domperidone, and erythromycin. In addition, gastric electrical stimulation has been shown to improve symptoms, reduce hospitalizations, reduce the need for nutritional support, and improve
quality of life in several open-label studies.

Source: EMBASE

Full Text:
Available in fulltext at National Library of Medicine

8. Single incision laparoscopic gastric bypass using EEA technique

Author(s): Sharma S.K., Awad Z.T., Ahmad B., Hester T.S.

Citation: Surgical Endoscopy and Other Interventional Techniques, March 2011, vol./is. 25/(S376), 0930-2794 (March 2011)

Publication Date: March 2011

Abstract: Introduction: Laparoscopic Roux en Y Gastric Bypass is one of the most commonly performed weight loss surgery in United States. This complex reconstructive surgery requires high level of expertise with little room for error. Single Incision Laparoscopic Surgery (SILS) is a new approach where by the whole surgery is performed using a small incision and inserting multiple ports thru it. Better cosmetics, less pain and faster recovery are potential advantages of this approach. Inadequate visualization, lack of space, expensive equipments, long operating time and being potentially unsafe are often criticism to the procedure. SILS has been successfully performed and reported for cholecystectomy, sleeve gastrectomy and lap band surgery. For the first time we are reporting our technique for performing Single Incision Laparoscopic Surgery for Roux en Y Gastric Bypass using EEA Stapler Technique. Method: Steps of Operation: Gelpoint port is used thru a 4 cm supra umbilical incision. 45 degree angle scope, regular bariatric instrument and reusable articulating instruments were used. Gastric pouch is created using articulating staplers. Orovil is passed by anesthesiologist using glidoscope and delivered out through posterior wall of pouch. Standard jejun-jeunostomy is created after measuring the roux limb. Enterotomy is stapled keeping bowel in midline position. Roux limb is then delivered out through Gelpoint port. EEA 25 mm stapler is introduced keeping wound protector. Spike is advanced under vision, aligned to anvil and fired to Create GJ anastomosis. Endoscopy is performed to check for leak or bleeding. Incision is closed in layers. We performed retrospective analysis of first 19 patients who underwent SILS LGBP over a period of 4 months. Selection criteria included BMI 35 -60, no prior major upper abdominal surgery and patient consenting for the approach. Result: Attempted in 18 patients. 6 patients required additional single 5 mm port. Average operating time was 130 min with minimal blood loss. No major complication, no leak on EGD and upper GI. Average hospital stay 30 hours. 3 patients developed small seroma which required drainage but no hospitalization. Conclusion: SILS LGBP is a reasonable option for selected patients. The procedure is safe and can be performed in a reasonable time with a potential of faster recovery, less pain, early discharge and better cosmetic outcome.

Source: EMBASE

9. Community-based appraisal of laparoscopic abdominal surgery in Japan

Author(s): Kuwabara K., Matsuda S., Fushimi K., Ishikawa K.B., Horiguchi H., Fujimori K.

Citation: Journal of Surgical Research, January 2011, vol./is. 165/1(e1-e13), 0022-4804;1095-8673 (January 2011)

Publication Date: January 2011

Abstract: Background: Despite the prevalence of laparoscopic surgery (LS), community-based appraisal of its benefit over open surgery (OS) has not been performed. This can be measured by increased total charge (TC) spent and decreased length of stay (LOS), which are indicative of greater resource use and opportunistic cost reduction. We prioritized the value of LS for eight abdominal procedures. Materials and methods: We used a Japanese administrative database for the 6 mo leading up to December 2007. Study procedures were appendectomy, cholecystectomy, choledocholithotomy, herniorrhaphy, colectomy, partial or total gastrectomy, and small bowel resection (SBR) in adults. We analyzed patient demographics, mortality, comorbidity, complications, use of chemotherapy or postoperative pain control, hospital teaching status, postoperative LOS, and TCs. The impact of LS was determined using multivariate analysis on the propensity-score-matched cohorts of LS and
OS. Results: Herniorrhaphy was most frequently performed (24,088 cases), whereas SBR was performed least (3404). LS was performed most often in cholecystectomy (81%) and least in herniorrhaphy (3.7%). LS did not increase complications in any procedure. Laparoscopic cholecystectomy and SBR were associated with shorter LOS and lower TC, whereas laparoscopic herniorrhaphy increased LOS and TC. Laparoscopic appendectomy and partial gastrectomy reduced LOS and increased TC. Conclusions: LS safety was confirmed. Laparoscopic cholecystectomy or SBR might have advantages, whereas laparoscopic was no better than open herniorrhaphy and might be decided by patient's preference. Considering the variation in the decremental opportunistic cost produced by incremental medical expenses observed among the procedures, policymakers should determine an appropriate reimbursement schedule.

Effects of immune-enhanced enteral nutrition and parenteral nutrition on immune and nutritional function in elderly patients with gastric cancer after total gastrectomy

Objective To evaluate the effects of immune-enhanced enteral nutritional support on the immune and nutritional function in elderly patients with gastric cancer after total gastrectomy. Methods Eighty-four elderly patients with gastric cancer undergoing total gastrectomy were randomly divided into glutamine-enhanced enteral nutrition group (Gln group, n = 28), conventional enteral nutrition group (EN group, n = 28) and parenteral nutrition group (PN group, n = 28). The time of anal exhaust after operation, incidences of postoperative complications and duration of hospitalization were observed. Serum total protein, albumin, prealbumin and transferrin were measured 1 d before operation, 2 d and 10 d after operation. Ten days after operation, the percentages of CD4+ T cells and CD8+ T cells in peripheral blood were measured, the ratio of CD4+ T cells to CD8+ T cells (CD4+/CD8+) was calculated, and the serum IgM and IgG were detected. Results The time of anal exhaust after operation and duration of hospitalization in Gln group and EN group were significantly shorter than those in PN group (P<0.05), while there was no significant difference in the incidences of postoperative complications among three groups (P>0.05). Two days after operation, the mass concentrations of serum total protein, albumin, prealbumin and transferrin were significantly lower than those before operation in three groups (P<0.05). Ten days after operation, the percentages of CD4+ T cells and CD8+ T cells in peripheral blood, CD4+/CD8+ and serum mass concentrations of IgM and IgG in Gln group recovered to those before operation, and were significantly higher than those in EN group and PN group at the same time point (P<0.05). Conclusion For elderly patients with gastric cancer undergoing total gastrectomy, glutamine-enhanced nutritional support early after operation is safe and feasible, which can improve nutritional and immune function, promote recovery and reduce duration of hospitalization.

Current status and future prospects of notes

NOTES (Natural orifice translumenal endoscopic surgery) is a new evolving minimally invasive surgery technique that offers a new way to access the abdominal cavity through a natural body orifice without any abdominal incisions. When compared with laparoscopic surgery, NOTES may provide several advantages, including less postoperative pain, decreased wound-related complications, faster recovery, and better
cosmesis. This concept has opened a new era in the field of gastroenterology and is being widely studied around the world. Current status worldwide Natural orifice transgastric endoscopic peritoneoscopy was first described in a porcine model in 2004. Since then many experimental studies have shown the possible application of NOTES to various surgical procedures, including transesophageal mediastinoscopy, fallopian tube ligation, oophorectomy, cholecystectomy, gastrojejunostomy, sigmoidectomy, splenectomy, distal pancreatectomy, and sleeve gastrectomy. The first human NOTES appendectomy by Reddy and Rao accelerated the clinical application of NOTES. In 2007, Marescaux et al. first reported transvaginal cholecystectomy in a human being using a flexible endoscope and only one 2-mm needlescopic instrument. Other clinical applications have been reported, such as appendectomy, cholecystectomy, peritoneoscopy for cancer staging, and nephrectomy, and human experience with NOTES is growing. Current status in Japan The Japan Gastroenterological Endoscopy Society (JGES) and the Japan Society for Endoscopic Surgery (JSES) established Japan NOTES in 2007. The primary purpose of Japan NOTES is to encourage the responsible development and safe adoption of NOTES into clinical practice. Japan NOTES has held an annual meeting since 2007 and has published NOTES research guidelines in Japan, including the nomenclature for NOTES in Japanese, guidelines for animal study, and regulations for studies conducted in conjunction with supporting device companies. Japan NOTES also established a registry system for clinical studies. Twelve clinical studies have been registered to date, and human NOTES procedures have been performed in 48 patients. These procedures include transgastric peritoneoscopy for cancer staging, transvaginal cholecystectomy, transvaginal endoscopic local resection of the stomach for gastric submucosal tumor, peroral endoscopic submucosal myotomy for esophageal achalasia, and laparoscopy-assisted endoscopic full-thickness resection of the stomach for gastrointestinal stromal tumor (GIST) or early cancer. In 2008, we performed the first NOTES procedure in Japan for preoperative staging in a pancreatic cancer patient. For safe and reliable peritoneal access and closure, we developed the submucosal tunnel technique through the use of the endoscopic submucosal dissection (ESD) procedure. Since April, 2008, ten patients with pancreatic cancer have undergone natural orifice transgastric peritoneoscopy, all without intraoperative complications. After confirmation of operative curability, all but one patient underwent standard open surgery. The tenth patient had small nodules on the liver surface; the lesions were biopsied and intraoperative frozen section examination revealed adenocarcinoma. The mucosal incision site in the stomach was closed with endoclips, and the operation was completed. The patient recovered well without postoperative complication and has been receiving chemotherapy. Our technique is as follows: (i) after injection of normal saline into the submucosal layer, a 2-cm incision of the mucosa is made by electrosurgical knife; (ii) the submucosal layer is dissected with an ESD knife to make a narrow longitudinal 5-cm submucosal tunnel; (iii) a small incision of the seromuscular layer is made at the distal end of the submucosal tunnel and enlarged with a dilation balloon, and (iv) the endoscope is then advanced into the peritoneal cavity for inspection. After transgastric peritoneoscopy, the mucosal incision site is closed with endoclips. We also successfully performed the first transvaginal cholecystectomy in Japan with the assistance of one 5-mm trocar and one needlescopic instrument. The patient was placed in the lithotomy position, and we used hydrotubation and transvaginal ultrasonography to prevent adjacent organ injury during the transvaginal access. A Foley catheter was inserted into the endocervical canal and saline was injected into the canal. After confirmation of saline in the Douglas pouch, an incision was made at the site of the vagina, and the endoscope with an over-tube was inserted through the vaginal wound into the peritoneal cavity. A 5-mm trocar was placed under endoscopic guidance. A needlescopic snare was used for retraction of the gallbladder. Dissection of Calot's triangle was begun with an insulated-tip (IT) knife and a grasping forceps with electrode. The cystic duct and artery were controlled with standard laparoscopic clips and were cut with laparoscopic scissors and laparoscopic coagulating shears. Dissection of the gallbladder from the liver bed was performed by ESD technique with an IT knife. The resected gallbladder was removed through the vagina. Two patients have undergone trans-vaginal cholecystectomy, both without complications, and both have recovered well. Future prospects Although clinical application of NOTES has already begun, several potential barriers to more widespread adoption still need to be resolved. The important problems include safe peritoneal access, closure of the portal of entry, development of endoscopic suturing and anastomotic devices and a multitasking platform, and management of intraoperative complications. Among these problems, development of a multitasking platform is the most significant concern for performing complex procedures using pure NOTES technique. We have evaluated a new multitasking platform called the
EndoSAMURAI (Olympus Medical Systems Corp.). This device provides great advantage by enabling performance of complex surgical tasks and traction and countertraction through two independently movable arms and drive handles that transmit the operator's hand motions to the arms. The device was used in transrectal cholecystectomy and transrectal esophageal myotomy and fundoplication in a porcine model, and the procedures were accomplished successfully. The device appears to serve as the multitasking platform needed for complex NOTES procedures. Such innovative technologies will contribute to the further development of endoscopic or laparoscopic treatments. Although NOTES appears to have the potential to revolutionize the field of minimally invasive surgery, the current human NOTES experience is limited. Further studies are needed to evaluate the true benefits of and indications for NOTES.

Source: EMBASE

12. **Laparoscopic gastric surgery in an enhanced recovery programme.**

**Author(s):** Grantcharov TP, Kehlet H

**Citation:** British Journal of Surgery, October 2010, vol./is. 97/10(1547-51), 0007-1323;1365-2168 (2010 Oct)

**Publication Date:** October 2010

**Abstract:** BACKGROUND: Laparoscopy is associated with less pain and organ dysfunction than open surgery. Improved perioperative care (enhanced recovery programmes, fast-track methodology) has also led to reduced morbidity and a shorter hospital stay. The effects of a combination of laparoscopic resection and accelerated recovery have not been examined previously in the context of gastric surgery. METHODS: This was a prospective study of 32 consecutive patients undergoing laparoscopic gastric resection combined with an enhanced recovery protocol (early oral intake, no drains or nasogastric tubes, no epidural analgesia, use of a urinary catheter for less than 24 h and planned discharge 72 h after surgery). Outcomes included length of hospital stay, intraoperative and postoperative complications, readmission rate and 30-day mortality. RESULTS: Operative procedures were elective distal or subtotal gastrectomy (22 patients) and total gastrectomy (10). Median length of hospital stay was 4 (range 2-30) days. There were two major complications: postoperative bleeding requiring reoperation and pulmonary embolism. Two patients required readmission, one for a wound abscess and one for treatment of a urinary tract infection. There were no deaths within 30 days. CONCLUSION: Minimally invasive gastrectomy with enhanced postoperative recovery results in a short hospital stay and low morbidity rate.

Source: MEDLINE

Full Text:
Available in fulltext at the ULHT Library and Knowledge Services’ eJournal collection

13. **Outcomes after laparoscopic techniques in major gastrointestinal surgery**

**Author(s):** Sharma B., Baxter N., Grantcharov T.

**Citation:** Current Opinion in Critical Care, August 2010, vol./is. 16/4(371-376), 1070-5295;1531-7072 (August 2010)

**Publication Date:** August 2010

**Abstract:** Purpose of review: Despite the benefits of minimally invasive surgery, its use in oncological resections has been adopted slowly. We highlight the differences in short-term and long-term outcomes between laparoscopic and open surgery for colorectal and gastric cancer. Furthermore, we review the relevance of postoperative fast-track methodologies in improving surgical outcomes after laparoscopic resections. Recent findings: Numerous randomized controlled trials demonstrate equivalent short-term and long-term outcomes (including oncologic outcomes) after laparoscopic colon resection. Though recent retrospective studies demonstrate its safety in rectal and gastric cancer resection, large-scale randomized controlled trials demonstrating its safe use in this setting are pending. Additionally, evidence to support the use of fast-track postoperative care modalities in gastrointestinal surgery continues to increase. These fast-track protocols should be implemented in conjunction with laparoscopic techniques to enhance patient recovery,
reduce postoperative ileus and length of hospital stay. Summary: Laparoscopic techniques are safe and at least equivalent to open surgery for colon cancer resections. Studies evaluating the role of laparoscopic techniques in rectal and gastric cancer resection are ongoing. Additionally, fast-track postoperative care methodologies improve recovery after surgery and should be applied to the clinical setting to enhance outcomes after laparoscopic surgery. 2010 Wolters Kluwer Health | Lippincott Williams & Wilkins.

Source: EMBASE


Author(s): Lee J., Hur H., Kim W.

Citation: Annals of Surgical Oncology, August 2010, vol./is. 17/8(2024-2030), 1068-9265;1534-4681 (August 2010)

Publication Date: August 2010

Abstract: Background: Although laparoscopy-assisted distal gastrectomy (LADG) for early gastric cancer (EGC) offers more advantages than open distal gastrectomy, it does not eliminate the postgastrectomy syndrome, which can negatively impact quality of life (QoL). In this paper, we investigate jejunal pouch interposition (JPI) during LADG and evaluate its potential for long-term use. Materials and Methods: Between April, 2004 and April, 2005, 28 patients underwent LADG with JPI (LA-JPI), and an equal number underwent LADG with Billroth-II gastrojejunostomy (LA-B-II). Of these, 25 patients with LA-JPI and 28 with LA-B-II, surviving more than 4 years, were enrolled. We compared clinicopathological characteristics, surgical outcomes, and the patients' QoL. Results: There were no differences in clinicopathological characteristics and surgical outcomes except longer operation time of LA-JPI group than LA-B-II group (P < 0.001). The gastrofiberscopy, performed 4 years after surgery, demonstrated significant higher incidence of bile reflux gastritis in LA-B-II group (P = 0.03). In terms of QoL metrics, we identified a significantly lower incidence rate of appetite change, heartburn, and reductions in physical strength and daily activity levels in the LA-JPI group. In addition, satisfaction with the operative procedure and postoperative life were higher. Although the number of meals per day did not differ, we noted a significantly greater food intake with each meal compared with the preoperative metric (P = 0.04) and reduced body weight loss (P = 0.003) was observed in the LA-JPI group. Conclusions: These long-term follow-up results suggest that LA-JPI might alleviate postgastrectomy syndrome and that this could help improve the QoL in patients with EGC. Recently, because of the increasing number of early gastric cancer patients and improvement in their survival rates, greater attention has been directed toward the quality of life (QoL) and the nutritional status of gastric cancer patients after surgery. However, conventional reconstructions, namely Billroth-I,-II (B-I and B-II), and Roux-en-Y, are known to exhibit certain limitations, such as a small reservoir and food stasis. Moreover, all known procedures are inevitably accompanied by postgastrectomy syndrome, which may involve weight loss following eating restriction, heartburn, loss of appetite, and changes in daily activity rates, consistent with a decline in physical strength. Since laparoscopy-assisted distal gastrectomy (LADG) was first introduced in 1994, it has been consistently performed by gastric surgeons and has become an alternative surgical option for early gastric cancer (EGC). Although LADG for EGC may improve short-term surgical results, including less wound pain, shorter hospital stays, and accelerated recovery, it still cannot resolve postgastrectomy syndrome, which may, in turn, diminish patient QoL. 1-3 Jejunal pouch interposition (JPI) between the remnant stomach and duodenum was recently introduced in conventional open distal gastrectomy (DG), not only to substitute for the small reservoir but also to maintain a physiologic pathway for ingested foods and to alleviate postgastrectomy syndrome. Its usefulness for gastric substitution has since been reported by several authors.4-7 However, the JPI has not proved commonly applicable for LADG because of its complexity and because of the challenges associated with the minimally invasive approach. Moreover, its long-term benefits in the context of gastrectomy syndrome and postoperative QoL remain Society of Surgical Oncology 2010.

Source: EMBASE

15. Impact of the introduction of laparoscopic wedge resection as a surgical option for suspected small/medium-sized gastrointestinal stromal tumors of the
**stomach on perioperative and oncologic outcomes**

**Author(s):** Goh B.K., Chow P.K., Chok A.Y., Chan W.H., Chung Y.F., Ong H.S., Wong W.K.

**Citation:** World journal of surgery, August 2010, vol./is. 34/8(1847-1852), 1432-2323 (Aug 2010)

**Publication Date:** August 2010

**Abstract:** BACKGROUND: The present study is designed to determine the feasibility and impact of the introduction of laparoscopic wedge resection as a surgical option for the treatment of suspected small/medium-sized (<7 cm) gastric gastrointestinal stromal tumors (GISTs). METHODS: The study involved a retrospective review of 53 consecutive patients who underwent laparoscopic or open wedge resection of a suspected gastric GIST. It was divided into two consecutive time periods wherein laparoscopic resection was a surgical option only in the latter period. Comparisons were made between the outcomes of patients who underwent laparoscopic versus open wedge resection and the outcomes of patients treated during the two consecutive time periods (to determine the impact of the introduction of laparoscopic wedge resection), RESULTS: Fourteen patients (26%) underwent laparoscopic wedge resection with 1 conversion. The pathological exam showed that 41 patients (77%) had a GIST. Laparoscopic resection was significantly associated with a longer operative time, an earlier return of bowel function, earlier resumption of liquid and solid diet, decreased duration of parenteral or epidural analgesia use, and shorter postoperative hospitalization compared to open resection. There was no statistical difference in the rate of R1 resection and actuarial recurrence-free survival for the two approaches. Comparison between the two time periods demonstrated that the introduction of the laparoscopic approach in the latter period resulted in an earlier return of bowel function, earlier resumption of liquid and solid diet, and decreased duration of parenteral or epidural analgesia. CONCLUSIONS: Laparoscopic wedge resection for gastric GIST can be safely adopted. It is associated with a more favorable perioperative outcome than the open approach. Its introduction as a surgical option has resulted in an improvement in perioperative outcomes without compromising oncologic safety at our institution.

**Source:** EMBASE

**Full Text:**
Available in fulltext at [EBSCOhost](https://www.ebscohost.com)

**16. Fast track postoperative management in bariatric surgery**

**Author(s):** Del Castillo D., Vives M., Cabrera A., Hernández M., Sabench F., Blanco S.

**Citation:** Obesity Surgery, August 2010, vol./is. 20/8(1050), 0960-8923 (August 2010)

**Publication Date:** August 2010

**Abstract:** Background: With the progressive development of minimally invasive surgery, the Fast Track concept has appeared in the last years. Fast track or multimodal rehabilitation is a combination of care plans designed to reduce the perioperative stress response, improve the pain control, facilitate early recovery and early patient discharge. The aim of our Fast Track postoperative management protocol for patients that undergo bariatric surgery is to achieve an early recovery with no impact in morbi-mortality taxes. Methods: A continuous control and the continuous change of decissions, are the main factors in the justification of the fast track. The use of peroperative intermittent pneumatic compression, low molecular weight heparin and early mobilisation prevents the thrombotic events. Chest physiotherapy in the immediatly postoperative period prevents the development of atelectasia. Early detection of anastomotic leaks by performing upper gastrointestinal transit in the first 24 hours. Results: In absence of anastomotic leaks the nasogastric tube is removed and a liquid diet started with strict control of the drain. If the productivity is minimal and have a good aspect, the drain is removed in 48 hours. Conclusion: Morbid obesity carries a large number of comorbidities. The use of these methods on these highly complex patients optimise the functional recovery and improve the surgical outcome, with early patient discharge and less morbidity.

**Source:** EMBASE
17. Combined use of laparoscopy and gastroscopy in treatment of gastric tumor

**Author(s):** Gu C.-W., Wu H.-R., Xing C.-G.

**Citation:** Journal of Practical Oncology, August 2010, vol./is. 25/4(447-449), 1001-1692 (10 Aug 2010)

**Publication Date:** August 2010

**Abstract:** Objective: To evaluate the efficacy of combined use of laparoscopy and gastroscopy in treatment of gastric tumor. Methods: The clinical data of 34 patients with gastric tumor undergoing laparoscopic gastrectomy were retrospectively reviewed. Gastroscopy was applied to locate the tumor during the surgery. Among this group of patients there were 5 cases of total gastrectomy, 3 cases of proximal gastrectomy, 26 cases of distal gastrectomy; and laparoscopic cholecystectomy was performed along with gastrectomy in 3 cases. Results: Total laparoscopic gastrectomy was performed in 2 cases; for other 36 cases dissection was performed under laparoscope and a 5-8 cm assistant incision was made for removal of specimen and completion of anastomosis. The operating time was 60-395 min, the volume of blood lose was 30-200 mL. It took the patients 28-60 h to have bowel movement, 36-48 h to get down from their beds, and 3-5 d to take in liquid diet. No analgesia treatment was applied. Only one patient had hemorrhage due to mucosal erosion of the esophagus, no other short-term complications including anastomotic leakage, intraperitoneal hemorrhage, incision infection were observed. Twenty-one patients were followed up for 6 months, there were no metastasis to the trocar site, assistant incision or inside the peritoneal cavity. Conclusion: The advantages of combined use of laparoscopy and gastroscopy in gastrectomy are minimal invasion, less pain, shorter hospital stay and rapid recovery.

**Source:** EMBASE

18. Resection of gastric stromal tumors by laparoscopy combined with gastroscopy: A report of 30 cases

**Author(s):** Ding P., Zhao Y., Li W., Jiang T.

**Citation:** Chinese Journal of Clinical Oncology, May 2010, vol./is. 37/9(527-530), 1672-7118 (15 May 2010)

**Publication Date:** May 2010

**Abstract:** Objective: To investigate the efficacy of laparoscopic and gastroscopic resection on gastric stromal tumors. Methods: The clinicopathologic data of 30 cases (18 males and 12 females) of gastric stromal tumors treated with laparoscopy combined with gastroscopy between July 2004 and March 2009 were retrospectively analyzed. Results: The preoperative diagnosis of gastric stromal tumors mainly relied on gastroscopy, ultrasound gastroscopy, barium meal, abdominal CT scan and abdominal MRI. Tumors were located in the posterior wall of the stomach in 11 cases, in the gastric anterior wall in 19 cases, in the lower portion of the stomach in 10 cases, in the gastric body in 16 cases (in the greater curvature side in 11 cases and in the lesser curvature in 5 cases), in the small bend of the gastric cardia in 1 case, and in the gastric body at the junction in 3 cases. All surgeries were successfully accomplished, with no death or conversion to laparotomy. The surgical duration was 40-120 min (70 min on average), with a blood loss of 20 mL to 80 mL. Tumor size ranged from 0.7 cm to 5 cm (1.5 cm on average). Postoperative immunohistochemistry showed positive expression of CD117 in 28 cases (96.6%) and positive expression of CD34 in 26 cases (86.6%). As to tumor-biological risk, 18 cases had very low degree risk, 9 cases had low degree risk, and 3 cases had moderate degree risk. No cases had high degree risk. Within 48h after surgery, patients could get out of bed and gastrointestinal function was restored. Patients had liquid diet at 2-3 days after surgery. No postoperative complications were observed. Postoperative hospital stay was 4-10 days. No recurrence or metastasis occurred in all of 30 cases during the follow up (1-36 months). Conclusion: Clinical manifestation of gastric stromal tumor lacks specificity and its diagnosis relies mainly on upper gastrointestinal imaging, video endoscopy, ultrasound endoscopy, and CT scan. The only effective treatment for gastric stromal tumors is surgical resection. Resection of gastric stromal tumors with laparoscopy combined with gastroscopy is a safe and effective treatment for gastric stromal tumor, with satisfactory positioning accuracy, fewer complications, less trauma, and faster postoperative recovery.

Author(s): Wang D, Kong Y, Zhong B, Zhou X, Zhou Y

Citation: Journal of Gastrointestinal Surgery, April 2010, vol./is. 14/4(620-7), 1091-255X;1873-4626 (2010 Apr)

Publication Date: April 2010

Abstract: BACKGROUND: Fast-track surgery is a new, promising comprehensive program for surgical patients and is beneficial to recovery. Prospective randomized, controlled clinical trials involving fast-track surgery for gastric cancer are lacking. PATIENT AND METHODS: Ninety-two patients with gastric cancer were randomly divided into a fast-track surgery group (n = 45) and conventional surgery group (n = 47). We compared outcomes (duration of postoperative stay in hospital, fever, and flatus, complications, and medical costs); postoperative serum levels of tumor necrosis factor-alpha, interleukin-6, and C-reactive protein; and resting energy expenditure between two groups. RESULTS: Compared with the conventional surgery group, the fast-track surgery group had no more complications (P > 0.05) with a significantly shorter duration of fever, flatus, and hospital stay, and less medical costs as well as a higher quality of life score on hospital discharge (all P < 0.05). With a significantly lower resting energy expenditure (days 1 and 3) postoperatively (P < 0.05), the fast-track surgery group showed a lower serum level of tumor necrosis factor-alpha (days 1 and 3), interleukin-6 (days 1 and 3), and C-reactive protein (days 1, 3, and 7) than the conventional surgery group (all P < 0.05). CONCLUSIONS: Fast-track surgery can lessen postoperative stress reactions and accelerate rehabilitation for patients with gastric cancer.

Source: MEDLINE

20. The impact and safety of preoperative oral or intravenous carbohydrate administration versus fasting in colorectal surgery—a randomized controlled trial.


Citation: Wiener Klinische Wochenschrift, January 2010, vol./is. 122/1-2(23-30), 0043-5325;1613-7671 (2010 Jan)

Publication Date: January 2010

Abstract: BACKGROUND AND AIMS: Increasing evidence suggests that preoperative fasting, as was the clinical practice for many decades, might be associated with untoward consequences and that a standardized preoperative intake of nutrients might be advantageous; this is a component of the enhanced recovery after surgery (ERAS) concept. Thus, in a randomized controlled trial we compared preoperative fasting with preoperative preparation with either oral or intravenous intake of carbohydrates, minerals and water. Biochemical, psychosomatic, echocardiographic and muscle-power parameters were assessed in surgical patients with colorectal diseases during the short-term perioperative period. We also assessed the safety of peroral intake shortly before surgery. METHODS: A total of 221 elective colorectal surgery patients in this bicentric, randomized, prospective and blinded clinical trial were divided into three groups: A - patients fasting from midnight (control group); B - patients supported preoperatively by glucose, magnesium and potassium administered intravenously; C - patients supported preoperatively by oral consumption of a specifically composed solution (potion). RESULTS: The general perioperative clinical status of patients in groups C and B was significantly better than those in group A. Psychosomatic conditions postoperatively were found to be best in group C (P < 0.029). The rise in the index of insulin resistance (QUICKI) from the preoperative to the postoperative state was significant in group A (P < 0.05). The systolic and diastolic function of the left ventricle improved postoperatively in group C vs. group A (P < 0.04), and the ejection fraction was also significantly higher postoperatively in group C vs. group A (P < 0.03). The gastric residual volume was 5 ml and the pH of stomach juice was 3.5-5 in all groups without statistically significant difference. No difference was found in the length of hospital stay or the rate of complications. CONCLUSIONS: Preoperative fasting does not confer any benefit or advantage for surgical patients. In contrast,
consumption of an appropriate potion composed of water, minerals and carbohydrates offers some protection against surgical trauma in terms of metabolic status, cardiac function and psychosomatic status. Peroral intake shortly before surgery did not increase gastric residual volume and was not associated with any risk.

Source: MEDLINE

21. Endoscopic sutured closure of a gastric natural orifice transluminal endoscopic surgery access gastrotomy compared with open surgical closure in a porcine model. A randomized, multicenter controlled trial

Author(s): Park P.O., Bergstrom M., Rothstein R., Swain P., Ahmed I., Gomez G., Raju G.S.

Citation: Endoscopy, 2010, vol./is. 42/4(311-317), 0013-726X;1438-8812 (2010)

Publication Date: 2010

Abstract: Background and study aims: In natural orifice transluminal endoscopic surgery (NOTES) procedures it is essential to be able to perform secure closure of the access perforation. The aim of this study was to compare endoscopically sutured closure of a gastric access gastrotomy using the tissue apposition system (TAS), with closure via laparotomy in a randomized multicenter study. Methods: A total of 32 pigs (1842kg) were used in this study. The gastric NOTES access was created using a needle knife and a 20-mm balloon. Following transgastric pelvic peritoneoscopy, the endoscope was withdrawn into the stomach. The animals were then randomized to endoscopic closure or laparotomy with surgical closure. Procedure time, recovery time, and weight gain were measured. At necropsy, adhesions, abscesses or peritonitis were recorded. Results: Of the 32 pigs, 29 survived 14 days without complications. All endoscopic and all open surgical closures were secure at postmortem. On average two suture pairs were used for endoscopic closure. Surgical closure was quicker (12.5 vs. 20.1 minutes). Recovery time and postoperative weight gain were similar for both groups. Two pigs in the endoscopic group died: one of gastric dilatation, without leakage from the gastrotomy; another was euthanized due to rectal prolapse. In the laparotomy group one pig was euthanized after 7 days due to abdominal wound dehiscence. At necropsy there were significantly more intra-abdominal adhesions in the laparotomized group. Conclusion: This randomized controlled study of endoscopic and surgical closure of a gastrotomy made for transperitoneal access for NOTES procedures suggests that both techniques are comparable in technical closure rates, postoperative recovery, and prevention of peritonitis. There were fewer adhesions in the endoscopic group. Georg Thieme Verlag KG Stuttgart New York.

Source: EMBASE

22. Laparoscopic assisted distal gastrectomy for early gastric cancer: is it an alternative to the open approach?.

Author(s): Yakoub D, Athanasiou T, Tekkis P, Hanna GB

Citation: Surgical Oncology, December 2009, vol./is. 18/4(322-33), 0960-7404;1879-3320 (2009 Dec)

Publication Date: December 2009

Abstract: OBJECTIVE: This study aims to compare short term outcomes and oncological value of laparoscopy assisted (LADG) and open distal gastrectomy (ODG) in the treatment of early gastric cancer. METHODS: Meta-analysis of 12 studies, including three randomized controlled trials, published between 2000 and 2007, comparing laparoscopy assisted and open distal gastrectomy in 951 patients with early gastric cancer, was done. Outcomes of interest were operative data, lymph node clearance, postoperative recovery complications. RESULTS: Overall morbidity rate was significantly less with LADG (10.5% versus 20.1%, P=0.003, OR 0.52, CI 0.34-0.8). A mean of 4.61 less number of lymph nodes dissected than ODG (CI -5.96, -3.26 P<0.001) when all studies are included. There was no difference between the two groups in number of lymph nodes dissected when less than D2 lymphadenectomy was done (2.44 nodes less in LADG group, CI -5.52, 0.63; P=0.12). LADG patients had less operative blood loss (mean of 151ml, P<0.001), less time to walking, oral intake and flatus. LADG patients had less length of hospital stay (5.7days, P<0.001), postoperative fever and pain. ODG group showed significantly less operative
time. There was no significant difference between the two groups in the incidence of anastomotic complications and wound infection. CONCLUSION: LADG is a safe technical alternative to ODG for early gastric cancer with a lower overall complication rate and enhanced postoperative recovery. Endorsing LADG as a better alternative to ODG requires data on long term survival, quality of life and cost effectiveness.

Source: MEDLINE

23. Natural orifice surgery: The next step in minimal invasiveness towards no scar surgery

Author(s): Forgione A.

Citation: Minerva Chirurgica, August 2009, vol./is. 64/4(355-364), 0026-4733 (August 2009)

Publication Date: August 2009

Abstract: The possibility to operate into the abdominal cavity by means of flexible endoscopes introduced through natural orifices represents a major step forward in the continuous research for minimal invasive treatment attaining the unimaginable goal of no scar surgery. After several years of investigation in experimental settings, natural orifice surgery is becoming a valuable therapeutic option both as totally transluminal endoscopic approach or with the support of minimal transabdominal assistance. The promising operative results and the great interest determined among the patients always looking for effective treatment associated with less bodily trauma, postoperative pain and faster recovery, are pushing the development of dedicated technological solutions that will make natural orifice - no scar surgery more easy and reproducible to perform and applicable also to more advanced diseases. Natural orifice surgery has the potential to abolish the historical association of surgery to that of scar and pain representing a very appealing surgical option for the patients highly respectful of their body and psychological integrity.

Source: EMBASE

24. Is botulinum toxin injection of the pylorus during Ivor-Lewis esophagogastrectomy the optimal drainage strategy?

Author(s): Cerfolio R.J., Bryant A.S., Canon C.L., Dhawan R., Eloubeidi M.A.

Citation: Journal of Thoracic and Cardiovascular Surgery, March 2009, vol./is. 137/3(565-572), 0022-5223 (March 2009)

Publication Date: March 2009

Abstract: Background: The optimal management of the pylorus during esophagogastrectomy is unknown. Pyloromyotomy and pyloroplasty cause early edema and risk long-term bile reflux; however, the lack of pyloric drainage might risk early aspiration. Methods: We performed a retrospective study with a prospective database on patients with esophageal cancer or high-grade dysplasia who underwent Ivor-Lewis esophagogastrectomy. All had one surgeon and similar stomach tubularization, hand-sewn anastomoses, nasogastric tube duration, and postoperative prokinetic agents. Outcomes of postoperative gastric emptying, aspiration, and swallowing symptoms were compared. Results: Between January 1997 and June 2008, there were 221 patients. Seventy-one patients had a pyloromyotomy, and gastric emptying judged on postoperative day 4 was delayed in 93% (52% had any morbidity and 14% had respiratory morbidity). Fifty-four patients had no drainage procedure, and gastric emptying was delayed in 96% (59% had any morbidity and 22% had respiratory morbidity). Twenty-eight patients underwent pyloroplasty, and 96% had delayed gastric emptying (50% had any morbidity and 32% had respiratory morbidity). Sixty-eight patients had botulinum toxin injection into the pylorus. Gastric emptying was delayed in only 59% (P = .002, 44% had any morbidity and 13% had respiratory morbidity). Hospital length of stay (P = .015) and operative times (P = .037) were shorter in the botulinum toxin group. Follow-up (mean, 40 months) showed symptoms of biliary reflux to be lowest in the botulinum toxin group (P = .024). Conclusion: Injection of the pylorus with botulinum toxin at the time of esophagogastrectomy is safe and decreases operative time when compared with pyloroplasty or pyloromyotomy. In addition, it can improve early gastric emptying, decrease respiratory complications, shorten hospital stay, and reduce late bile reflux. A prospective multi-institutional randomized trial is needed.
2009 The American Association for Thoracic Surgery.


Author(s): Lemmens L, van Zelm R, Borel Rinkes I, van Hillegersberg R, Kerkkamp H

Citation: Digestive Surgery, 2009, vol./is. 26/2(91-9), 0253-4886;1421-9883 (2009)

Publication Date: 2009

Abstract: BACKGROUND/AIMS: Oncology surgery of the gastrointestinal tract is complex and infamous for its high complication rates. One of the methods for implementing interventions to optimize the patients' condition and to enhance postoperative outcome is the development and implementation of a clinical pathway. The aim of this study was to analyze the content, i.e. the interventions of clinical pathways for digestive surgery and their effects on postoperative outcome measures.METHODS: We performed a systematic review to study clinical pathways in hospital care for adult patients undergoing elective surgery of the stomach, esophagus, pancreas, liver, colon or rectum. The MEDLINE, EMBASE and CINAHL literature databases were searched.RESULTS: The most common interventions in the clinical pathways in this review were defined in the pre- and postoperative phase and included: nutritional management, pain management, mobilization, education and discharge planning. The primary aim of these interventions was to enhance postoperative recovery.CONCLUSION: Clinical pathways for digestive surgery contain specific interventions to improve postoperative outcome. Most of these interventions are in accordance with the Enhanced Recovery After Surgery (ERAS) protocol, which is an evidence-based protocol for care after colon resections. They result in reduced length of stay without compromising other postoperative outcome measures. Copyright 2009 S. Karger AG, Basel.

Source: MEDLINE

Full Text: Available in fulltext at EBSCOhost


Author(s): Jiang K, Cheng L, Wang JJ, Li JS, Nie J

Citation: World Journal of Gastroenterology, January 2009, vol./is. 15/4(496-501), 1007-9327;1007-9327 (2009 Jan 28)

Publication Date: January 2009

Abstract: AIM: To investigate the feasibility of fast track clinical pathway for esophageal tumor resections.METHODS: One hundred and fourteen patients with esophageal carcinoma who underwent esophagogastrectomy from January 2006 to October 2007 in our department were studied. Fast track clinical pathway included analgesia control, fluid infusion volume control, early ambulation and enteral nutrition. Nasogastric tube was removed 3 d after operation and chest tube was removed 4 d after operation as a routine, and full liquid diet 5 d after operation.RESULTS: Among 114 patients (84 men and 30 women), 26 patients underwent fast track surgery, including 17 patients over 65 years old and 9 under 65 (P=0.014); 18 patients who had preoperative complications could not bear fast track surgery (P<0.001). No significant differences in tolerance of fast track surgery were attributed to differences in gender, differentiated degree or stage of tumor, pathological type of tumor, or operative incision. The median length of hospital stay was 7 d (5-28 d), 4% patients were readmitted to hospital within 30 d of discharge. Three patients died and postoperative mortality was 2.6%. All 3 patients had no determinacy to fast track surgery approach.CONCLUSION: The majority of patients with esophageal carcinoma can tolerate fast track surgery. Patients younger than 65 or who have no preoperative diseases have the best results. Median length of hospital stay has been reduced to 7 d.

Source: MEDLINE

Full Text:
27. New: Single-incision transumbilical laparoscopic surgery

Author(s): Brunner W., Schirnhofer J., Waldstein-Wartenberg N., Frass R., Pimpl K., Weiss H.G.

Citation: European Surgery - Acta Chirurgica Austriaca, 2009, vol./is. 41/3(98-103), 1682-8631;1682-4016 (2009)

Publication Date: 2009

Abstract: Background: On the way to "no-scar" techniques novel single-incision laparoscopic methods are developed, which result in a non-visible postoperative scar. Methods: A total of 136 patients (age 10-86; 68f/68m) underwent single-incision laparoscopic surgery at our Department for diseases of the appendix, gallbladder, colon, esophagus, liver, adrenal gland, inguinal hernia, or symptomatic adhesions. The entire operations were carried out transumbilically following the standardized procedural principles. Results: Operative time ranged from 17 to 218 min. In 16 patients (11.8%) additional trocars were inserted for procedural safety. No intraoperative adverse event or significant perioperative complication was noticed. Operative estimated blood loss yielded minimal, blood suction was needed only for liver resection and adrenalectomy. Specimen retrieval was carried out either by means of an endo-bag or directly utilizing a transumbilical protection sheet. Patients resumed oral intake at the day of surgery after cholecystectomy, hernia repair or appendectomy, or within 24 h after major surgery according to the principles of fast-track abdominal surgery. Patients' discharge was on postoperative days 1-12 (Mean 3.8 d). At follow-up after 1-4 weeks patients presented with an optimal cosmetic result without apparent scarring. Conclusions: Single-incision transumbilical laparoscopy allows further reduction of the surgical trauma and to obviate any visible scar in various procedures. Springer-Verlag 2009.

Source: EMBASE

28. Human hybrid NOTES transvaginal sleeve gastrectomy: initial experience

Author(s): Ramos A.C., Zundel N., Neto M.G., Maalouf M.

Citation: Surgery for Obesity and Related Diseases, September 2008, vol./is. 4/5(660-663), 1550-7289 (September 2008/October 2008)

Publication Date: September 2008

Abstract: Laparoscopic sleeve gastrectomy is gaining popularity as a treatment of morbid obesity. It is a relatively new procedure with a postoperative follow-up not exceeding 5 years. The natural orifice transluminal endoscopic surgical procedures are also gaining in popularity, and we are now experiencing the first transition from animal to human trials. We describe the first sleeve gastrectomy surgery for morbid obesity using the vagina as the natural orifice in the form of a hybrid natural orifice transluminal endoscopic surgery transvaginal sleeve gastrectomy, including the short-term outcomes and complications.

2008 American Society for Metabolic and Bariatric Surgery.

Source: EMBASE

29. Natural Orifice Transluminal Endoscopic Surgery (NOTES)

Author(s): Kim Y.S., Kim C.Y., Chun H.J.

Citation: The Korean journal of gastroenterology = Taehan Sohwagi Hakhoe chi, March 2008, vol./is. 51/3(154-158), 1598-9992 (Mar 2008)

Publication Date: March 2008

Abstract: Recently, the field of gastrointestinal endoscopy is developing rapidly. Once limited to the gastrointestinal lumen, the endoscopic technology is now breaking the barriers and extending its boundary to peritoneal and pleural space. In 2004, Dr. Kalloo, a gastroenterologist, observed intraperitoneal organs of a pig using a conventional endoscope through the stomach wall. Since then, new endoscopic technique of intraperitoneal intervention with transluminal approach named the Natural Orifice
Transluminal Endoscopic Surgery or NOTES has been introduced. NOTES reaches the target organ by inserting the endoscope through a natural orifice (e.g. mouth, anus, vagina, urethra) and entering the peritoneal lumen by means of making an incision on the luminal wall. After a series of successful experiences in animal studies, NOTES are now being tried on human subjects. There are still many obstacles to overcome, but bright future for this new technology is expected because of its proposed advantages of less pain, lower complication rate, short recovery time, and scarless access. In this review, we plan to learn about NOTES.

Source: EMBASE

30. Dry or wet - Which is the best for your patients?

Author(s): Brandstrup B.

Citation: Southern African Journal of Anaesthesia and Analgesia, January 2008, vol./is. 14/1(32-36), 2220-1181 (January/February 2008)

Publication Date: January 2008

Abstract: Perioperative fluid therapy is the subject of much controversy, and the existing evidence seems contradictory. The aim of this paper is to present the (missing) evidence supporting the current standard fluid therapy, as well as the original trials examining the effects of fluid therapy on outcome of surgery. To emphasise the fluid loss that actually occurs during surgery, the literature examining the evaporation from the abdominal wound, the fluid accumulations in the traumatised tissues, as well as the postulated changes in functional extracellular volume (i.e. the 'loss to third space') is briefly presented and critically analysed. An attempt is made to evaluate all the trials examining the influence of fluid volume on outcome of surgery. The trials of goal-directed fluid therapy can be divided into two categories: the trials that examine the effect of zero fluid balance and the goal of normal bodyweight (the original restricted fluid trials), and the trials examining the effect of giving fluid to a target physiological value measured with either a pulmonary artery catheter or with an ultrasound Doppler device placed in the oesophagus. In addition to the goal-directed trials, the trials examining the effect of fixed volume fluid therapy will be presented. These 'fixed volume trials' concern mostly patients undergoing minor surgical procedures in an outpatient surgical setting. The following conclusions are reached: current fluid therapy is not at all evidence based. The fluid losses that actually occur during surgery are highly overestimated. The perspiration from the surgical wound as well as the fluid accumulated in traumatised tissue is very small in elective surgery. The "loss to third space" is based on flawed methodology and most probably does not exist. The results of the goal-directed trials examining the effect of fluid therapy guided by a catheter in the pulmonary artery have not been unanimous, and the most exhaustive of these trials including 1 999 patients failed to show any benefit. The trials giving fluid to a maximal stroke volume guided by a Doppler in the oesophagus have several weaknesses, making the results of the trials very difficult to interpret, yet the method seems promising. The trials focusing on zero fluid balance with the goal of normal body weight have shown that fluid overload with crystalloids causes harm, and avoidance of this fluid overload convincingly improves the outcome. This approach is confirmed by the trials giving a fixed volume of fluid during outpatient surgery, showing improved postoperative recovery by replacing the deficit caused by fasting. Patients undergoing major surgery should not be treated with a fixed fluid volume.

Source: EMBASE

31. Recovery pattern and home-readiness after ambulatory gastrointestinal endoscopy

Author(s): Amornyotin S., Chalayonnavin W., Kongphlay S.

Citation: Journal of the Medical Association of Thailand, November 2007, vol./is. 90/11(2352-2358), 0125-2208;0125-2208 (Nov 2007)

Publication Date: November 2007

Abstract: Background: Despite increased use of ambulatory gastrointestinal endoscopy, few data exist regarding patient recovery patterns and home-readiness. Objective: The authors prospectively identified the pattern of home-readiness, the persistent symptoms after procedure and the factors that delay discharge after home-readiness criteria are
satisfied. Material and Method: Three hundred and sixty-nine patients were scored by the investigator using the Modified Post-Anesthetic Discharge Scoring System (PADSS) every 30 min, commencing 30 min after procedure, until the PADSS score was >= 9. The same investigator telephoned each patient 24 hr after discharge to administer a standardized questionnaire so that postoperative symptoms could be identified. Results: The number of patients who satisfied the PADSS home-readiness criteria was 81.6%, 97.9%, and 100% at 30, 60, and 90 min, respectively. All patients were promptly discharged before two hours. After home-readiness criteria were satisfied, 36% of patients had delayed discharge because of the unavailability of immediate escorts or other non-medical reasons. No patient had persistent symptoms and all patients could achieve a PADSS score >= 9 three hours after anesthesia. The patients undergoing shorter endoscopic procedures, such as EGD or dilated esophagus were discharged faster than patients undergoing colonoscopy or duodenal stent. The 24 hr postoperative symptoms were mainly sore throat, pain, weakness, and abdominal distension. There was no incidence of unanticipated admission. Conclusion: Periodic objective evaluation of home-readiness revealed that the majority of patients would achieve a satisfactory score on or before 1 hr after procedure. The time to home-readiness by objective evaluation correlated with the type of procedure. Most delays after satisfactory home-readiness scores were reached, were due to non-medical reasons.

Source: EMBASE

32. [The safety and efficiency of fast track surgery in gastric cancer patients undergoing D2 gastrectomy].

Author(s): Jiang ZW, Li JS, Wang ZM, Li N, Liu XX, Li WY, Zhu SH, Diao YQ, Nai YJ, Huang XJ

Citation: Chung-Hua Wai Ko Tsa Chih [Chinese Journal of Surgery], October 2007, vol./is. 45/19(1314-7), 0529-5815;0529-5815 (2007 Oct 1)

Publication Date: October 2007

Abstract: OBJECTIVE: To investigate the safety and efficacy of fast track surgery (FTS) management in gastric cancer undergoing D2 gastrectomy. METHODS: Eighty gastric cancer patients undergoing D2 gastrectomy were recruited prospectively. Patients were assigned to receive FTS management (n = 40) or conventional perioperative care (n = 40). The FTS care included shorten preoperative fasting time, no nasogastric decompressing tubes and abdominal drainage placed, early postoperative oral feeding, multimodal analgesia, and early mobilisation. The length of postoperative hospital stay, medical cost, nutritional status, gut function, and postoperative complications in the two groups were recorded and compared. RESULTS: FTS group was associated with a significantly shorter postoperative hospital stay compared with conventional care group [(5.6 +/- 1.3) d vs. (9.4 +/- 1.9) d, P < 0.05]. Medical cost was less [(18 620 +/- 2360) Yuan vs. (20 370 +/- 2440) Yuan, P < 0.05] and duration of intravenous infusion [(3.5 +/- 1.4) d vs. (5.8 +/- 1.9) d, P < 0.05] was also shorter. First passage of flatus was earlier in FTS group than in conventional care group [(4.3 +/- 0.4) d vs. (5.5 +/- 0.9) d, P < 0.05]. Loss of body weight in the postoperative period was less in FTS group [(3.2 +/- 0.8) kg vs. (4.3 +/- 1.6) kg, P < 0.05]. There was no difference in morbidity or mortality between the two groups. CONCLUSION: FTS in D2 gastrectomy is safe and efficient, and it can shorten postoperative hospital stay and hasten return of gut function.

Source: MEDLINE

33. Laparoscopic gastrectomy with regional lymph node dissection for upper gastric cancer

Author(s): Tanimura S., Higashino M., Fukunaga Y., Kishida S., Ogata A., Fujiwara Y., Osugi H.

Citation: British Journal of Surgery, February 2007, vol./is. 94/2(204-207), 0007-1323:1365-2168 (Feb 2007)

Publication Date: February 2007

Abstract: Background: The technique and results of laparoscopic gastrectomy in 110 patients with gastric cancer located in the upper third of the stomach are presented. Methods: Proximal gastrectomy was performed for lesions in the upper third of the
stomach, and total gastrectomy for those that spread over both the upper and middle third. D1 and D2 lymph node dissection was undertaken in patients with T1 or T2 lesions. Anastomosis of the oesophagus was performed intracorporeally using a conventional circular stapling device or a laparoscopic linear stapler. Results: Median operating time was 247 min for proximal gastrectomy and 285 min for total gastrectomy; median blood loss was 207 and 334 ml respectively. A median of 23 lymph nodes was harvested from patients in the proximal gastrectomy group and 34 from those having a total gastrectomy. There was minimal morbidity and fast recovery after surgery. Postoperative recurrence occurred in only one patient, giving a recurrence rate of 0.9 per cent. Conclusion: Laparoscopic gastrectomy for upper gastric cancer appears to be a safe and curative procedure. Copyright 2006 British Journal of Surgery Society Ltd Published by John Wiley & Sons Ltd.

Source: EMBASE

Full Text:
Available in fulltext at the ULHT Library and Knowledge Services' eJournal collection

34. Residual stomach, duodenum and continual jejunal interposition after subtotal gastrectomy

Author(s): Ye Z.-Y., Yu J.-F., Zhang R.-L., Xu J., Ye S.-Y., Zhang Q.

Citation: National Medical Journal of China, August 2005, vol./is. 85/30(2117-2119), 0376-2491 (10 Aug 2005)

Publication Date: August 2005

Abstract: Objective: To investigate the clinical effect of residual stomach, duodenum, and continual jejunal interposition on the patients of gastric cancer after subtotal gastrectomy. Methods: Fifty-four patients with gastric cancer after subtotal gastrectomy were randomly divided into 2 groups: Group A (n = 26, receiving digestive tract reconstruction by manual end-to-side anastomosis of residual stomach and jejunum, end-to-side anastomosis of residual duodenum and jejunum, and side-to-side anastomosis of jejunum and jejunum, then the jejunum proximal to the stomach-jejunum anastomosis and the jejunum distal to the duodenum-jejunum anastomosis were ligated so as to form an integral continual jejunal interposition; and Group B (n = 28, receiving Bilroth digestive tract reconstruction. The operation time, body weight, prognosis nutrition index (PNI), and Visick score 3 and 6 months after the operation were observed. Results: All patients recovered quickly and no complicating anastomosis leakage and obstruction was found. It took 53 +/- 9 minutes to finish the reconstruction in Group A, significantly shorter than that in Group B (57 +/- 6 minutes, t = -2.145, P = 0.037). The body weight and PNI of both groups decreased significantly 3 months after the operation in comparison with those before the operation (both P < 0.05). The body weight and PNI of Group A returned to the levels before operation. Although the body weight and PNI of Group B recovered to some extent 6 months after operation, they remained significantly lower than those before operation both P < 0.05). The Visick score 6 months after operation of Group A was superior to that of Group B (t = 2.1 P < 0.05). Conclusion: Residual stomach, duodenum, and continual jejunal interposition after subtotal gastrectomy helps overcome the difficulty in the procedure of digestive tract reconstruction and restore the physiological passage through duodenum, thus avoiding reflux and improving patients' quality of life.

Source: EMBASE

35. Quick recovery of serum diamine oxidase activity in patients undergoing total gastrectomy by oral enteral nutrition

Author(s): Kamei H., Hachisuka T., Nakao M., Takagi K.

Citation: American Journal of Surgery, January 2005, vol./is. 189/1(38-43), 0002-9610 (Jan 2005)

Publication Date: January 2005

Abstract: Background: Total parental nutrition (TPN) meets the metabolic needs of postoperative patients, but introduces potential complications, including intestinal mucosal atrophy. Surgical advances have increased the certainty of esophagoenteric anastomosis...
making early oral enteral feeding after surgery feasible. The objective of the current report is to compare the benefits of enteral nutrition (EN) and TPN in patients undergoing total gastrectomy for gastric cancer. Methods: Forty-two patients who underwent total gastrectomy for gastric cancer were randomized to receive oral EN beginning on postoperative day (POD) 3 with peripheral supplements or TPN beginning on POD 3. Serum concentrations of albumin and retinol-binding protein (RBP) as nutritional parameters and diamine oxidase (DAO) activity, an enzyme reflecting mucosal integrity, were measured preoperatively and 1, 4, 7, and 14 days postoperatively and compared between the 2 groups. Complications, abdominal symptoms, duration of hospital stay, and treatment cost per hospitalization were also compared. Albumin and RBP concentrations changed little in either group. DAO activity decreased in both groups and recovered within 1 week in the EN group but not in the TPN group. Complications were similar in the 2 groups. Treatment cost was less and length of hospital stay was shorter in the EN group. Conclusions: EN is an efficient way to provide nutrition to patients and possibly prevent intestinal atrophy in the patient who must endure prolonged postoperative fasting. Compared to TPN, EN reduces treatment cost and hospital length-of-stay. 2004 Excerpta Medica Inc. All rights reserved.

Source: EMBASE

36. Accelerated rehabilitation with early postoperative oral feeding following gastrectomy

Author(s): Suehiro T., Matsumata T., Shikada Y., Sugimachi K.

Citation: Hepato-Gastroenterology, November 2004, vol./is. 51/60(1852-1855), 0172-6390 (Nov 2004)

Publication Date: November 2004

Abstract: Background/Aims: To evaluate the safety and efficacy of early oral feeding in patients undergoing gastrectomy. Methodology: One hundred patients undergoing gastrectomy were studied. Patients in the early oral feeding group (Early group) began a liquid diet within 48 hours after operation and patients within the Traditional group received nothing by mouth until the resolution of the ileus. All of the patients were monitored for vomiting, abdominal distention, length of ileus, tolerance of regular diet, duration of intravenous fluid administration, length of hospitalization, and complications. Results: The time to flatus was 55.5+/-12.5 hours and 78.0+/-22.2 hours in the Early and Traditional group, respectively (p<0.05). And fasting period was 2.14+/-1.08 days and 5.93+/-2.35 days in the Early and Traditional group, respectively (p<0.05). In addition, duration of intravenous fluid administration was shorter in the patients in the Early group compared with Traditional group (5.7+/-1.7 days vs. 9.2+/-3.9 days, p<0.05). As a result, length of postoperative hospitalization in the patients in the Early group was significantly shorter than those in the Traditional group (16.2+/-5.3 days vs. 23.4+/-9.8 days, p<0.05). The incidence of complications including nausea, vomiting, anastomotic leak and wound infection occurred equally in both groups. Conclusions: Early oral feeding after gastrectomy is safe, with no evidence of increased morbidity, and early postoperative oral feeding is also highly effective in reducing hospital stay.

Source: EMBASE

37. Early oral feeding and digestive surgery [French] Realimentation precoce et chirurgie digestive

Author(s): Alves A., Panis Y.

Citation: Nutrition Clinique et Metabolisme, September 2004, vol./is. 18/3(131-136), 0985-0562 (Sep 2004)

Publication Date: September 2004

Abstract: Malnutrition is often unsuspected and is today well-recognized as a potential cause of increased morbidity. The aim of this review was to assess the influence of early postoperative nutrition in digestive surgery. Review of the literature has shown eight prospective randomized studies that have compared early oral feeding versus standard feeding after elective colorectal surgery. Early oral feeding was tolerated by the majority of the patients. Furthermore, early oral feeding was not associated with increased mortality.
and morbidity rates. Fast-track rehabilitation (i.e. early oral feeding, epidural analgesia and early mobilization), accelerate today recovery after colorectal surgery, leading to in-hospital stay reduction. In upper-GI surgery, a randomized trial has shown that early postoperative enteral nutrition reduced postoperative infectious complications. Furthermore, 15 studies have compared postoperative enteral (by nasogastric suction or by percutaneous jejunostomy) versus total parenteral nutrition. Postoperative enteral nutrition was tolerated by 80% of the patients and was not associated with increased mortality and morbidity rates. Although, postoperative in-hospital stay was similar between both procedures, postoperative enteral nutrition was cheaper than total parenteral nutrition. In conclusion, currently available data show that early postoperative nutrition such as oral nutrition after elective colorectal surgery or enteral nutrition after upper intestinal surgery was not associated with increased mortality or morbidity rates. Thus, early postoperative nutrition should be proposed in patients after elective digestive surgery. 2004 Elsevier SAS. Tous droits reserves.

Source: EMBASE


Citation: Journal of Gastrointestinal Surgery, November 2003, vol./is. 7/7(879-883), 1091-255X (November 2003)

Publication Date: November 2003

Abstract: The incidence of gastric cancer and the need for subsequent surgery has been decreasing in the United States. However, very few population-based studies on the magnitude of these changes are available. The objective of the present study was to characterize temporal trends in the use of gastric resection in the treatment of gastric cancer. Patients with a primary diagnosis code for gastric cancer (N = 105,887) and a procedure code for gastric resection (N = 23,690) in the Nationwide Inpatient Sample for 1988-2000 were included. The Nationwide Inpatient Sample represents a 20% stratified random sample representative of all United States hospitals. Outcome variables included the overall incidence, in-hospital mortality rate, and length of stay. Rates of surgery are shown as the number of cases per 100,000 hospital discharges. Hospital volume was defined as follows: low volume (1 to 4 cases per year), medium volume (5 to 8 cases per year), and high volume (9 or more cases per year). Rates of gastric resection have shown a 20% decline from 30 cases per 100,000 (1988-1989) to 24 cases per 100,000 (1999-2000) (P = 0.001). In-hospital mortality has not changed over the 13-year period and remains at 7.4%. There was significant variation in mortality across hospitals, with very low-volume centers having an 8.9% mortality rate, whereas very high-volume centers had a 6.4% mortality rate (P<0.001). The market share of gastric resections performed at high-volume centers increased a small amount from 43% (1988-1989) to 48% (1999-2000) (P = 0.023). Over the 13-year period, length of stay decreased from 15 days (interquartile range [IQR] 11-23) in 1988 to 11 days (interquartile range [IQR] 8-16) in 2000 (P<0.001). Rates of gastric resection for cancer have shown a modest decline over the past 13 years in the United States. Although the length of stay for these patients has decreased, no significant changes to in-hospital mortality have occurred. Given the declining rates of gastric cancer surgery, and the superior outcomes at high-volume centers, regionalization of care may improve mortality rates for this high-risk surgical procedure. 2003 The Society for Surgery of the Alimentary Tract.

Source: EMBASE

39. Efficacy of TS-1 in patients with peritonitis carcinomatosa from gastric cancer

Author(s): Nakagawa A., Ichiki M., Sai K., Sugawara H.

Citation: Gan to kagaku ryoho. Cancer & chemotherapy, October 2003, vol./is. 30/10(1501-1503), 0385-0684 (Oct 2003)

Publication Date: October 2003
Abstract: Medical treatment with TS-1 was performed in patients with gastric cancer with peritonitis carcinomatosa. The median survival time for the patients who underwent distal or total gastrectomy was 14.0 months, and that for the patients who underwent exploratory laparotomy was 9.3 months. Compared with other medical care, the anti-cancer drug TS-1 enabled prolonged survival time and shortened hospitalization. Since TS-1 had few side effects, it was useful to patients suffering from gastric cancer with peritonitis carcinomatosa.

Source: EMBASE

40. Clinical significance of a standardized clinical pathway in gastrectomy patients

Author(s): Kiyama T., Tajiri T., Yoshiyuki T., Mitsuhashi K., Ise Y., Mizutani T., Okuda T., Fujita I., Masuda G., Kato S., Matsukura N., Tokunaga A., Hasegawa S.

Citation: Journal of Nippon Medical School, June 2003, vol./is. 70/3(263-269), 1345-4676 (Jun 2003)

Publication Date: June 2003

Abstract: In traditional practice patterns, physicians take care of all clinical decisions, such as diagnosis, treatment, and recovery. In the Nippon Medical School Hospital a clinical pathway for distal gastrectomy patients, recorded as a post-operative care map, was introduced in August 2000. In January 2001 the post-operative management was analyzed and standardization of practice was carried out with printed order sets, such as drugs and infusion solutions. The aim of this study was to evaluate the clinical significance of the clinical pathway for gastrectomy patients by employing standardized postoperative management and printed order sets. Patients and methods: From January 2001 to December 2001, 87 patients underwent distal (43), total (28), proximal (7) and partial gastrectomy (9) for gastric cancer (stage IA: 47, IB: 9, II: 7, IIIA: 8, IIIB 2, IV: 10) and gastrointestinal stromal tumor (4). These patients were randomly assigned to either the main building or the east building of our hospital. In the main building 38 patients were looked after using traditional practice (control group). In the east building 47 patients were looked after according to the clinical pathway (path group) and 2 patients were excluded from the path group because of neo-adjuvant chemotherapy and severe heart failure. Aspects of the patients’ outcomes, including length of stay, the first day of the diet, morbidity, and medical costs, were compared between the path group and the control group. All data were expressed as means +/- standard deviation. Statistical analyses were made using Student t-test, Mann-Whitney U-test, and chi² test, and the 5% level was chosen for statistical significance. Results: The length of the hospital stay was 27.1 +/- 10.0 and 40.8 +/- 26.1 days (p < 0.005) and the length of post-operative stay was 18.1 +/- 9.5 and 28.2 +/- 22.3 days (p < 0.01) in the path group and the control group, respectively. The post-operative day when the diet was started for the path and control groups was 6.8 +/- 8.9 and 8.2 +/- 7.2, respectively; however, the length of the intravenous infusion for the two groups was 11.8 +/- 1.1 and 16.5 +/- 1.2 days (p < 0.01), respectively. There was no statistically significant difference in the morbidity rate between the path group (3/47) and the control group (5/38). The total cost was 1,502,587 +/- 41,650 in the path group and 1,932,197 +/- 131,030 in the control (p < 0.001). Conclusion: A clinical pathway for gastrectomy patients proved useful to optimize their postoperative care, including medication management and diet education. It is suggested that the implementation of a standardized clinical pathway for gastrectomy patients reduced the length of the hospital stay and the medical costs.

Source: EMBASE

41. Progress in gastrointestinal tract surgery: The impact of gastrointestinal endoscopy. Marks lecture

Author(s): Beger H.G., Schwarz A., Bergmann U.

Citation: Surgical Endoscopy, February 2003, vol./is. 17/2(342-350), 0930-2794 (01 Feb 2003)

Publication Date: February 2003

Abstract: Background: Gastrointestinal (GI) tract surgeons were challenged with the development of two revolutionary surgical specialities: laparoscopic and endoscopic
surgery. Minimal access surgery currently is the surgical speciality with the greatest impact on patient care. Regarding the competitive treatment methods (open, laparoscopic, and intraluminal endoscopic management), each new treatment must be evaluated on the evidence of the patient's benefit, surgical morbidity, short- and long-term outcome, cost effectiveness and maintenance of quality of life. Methods: On the basis of randomized clinical trials, minimal access surgery results in reduced postoperative pain, reduced early postoperative analgetic medication, reduced frequency of systemic inflammatory response syndrome and systemic complications, early restoration of normal bowel function, and minimalization of wounds and skin scars. Among the well-established laparoscopic procedures, laparoscopic cholecystectomy has been convincingly demonstrated as superior to open cholecystectomy on the basis of controlled clinical trials. Superior benefit in favor of laparoscopic hernia repair has been demonstrated only regarding a lower level of pain, a higher level of physical activity, and earlier return to work. However, in terms of operating time and costs, open repair without mesh has benefits. Laparoscopic appendectomy offers benefits in terms of pain reduction, faster postoperative recovery, and lower incidence of wound infections, but has major drawbacks with regard to longer operating time, higher local complication rates, and significantly higher costs for total hospitalization. A cost study group concluded from a randomized clinical trial that only minimal short-term quality-of-life benefits were found for laparoscopically assisted colon resection, as compared with standard open colectomy, for colon cancer. On the basis of controlled clinical trials, there is only a little doubt that the laparoscopic approach is currently the operative treatment of choice for gastroesophageal reflux compliance. Endoscopic intraluminal techniques are increasingly important for minimalization of surgical treatment. For ulcer bleedings, endoscopic treatment is the established first choice. A major old and new challenge for GI tract surgeons is the intraluminal endoscopic approach to lesions. For neoplastic lesion in the esophagus (> 2 cm, mucosa restricted), Barrett's epithelium, early gastric cancer, adenoma of the ampulla of Vater, T1, TIM lesion of the large bowel, T1 cancer of the rectum, intraluminal endoscopic treatment methods are increasingly replacing open surgical resection or even a laparoscopic technique. The surgeon must be aware that many of the local surgical complications, particularly those of GI tract anastomoses, are managed by endoscopic techniques. Conclusions: The GI tract surgeon must accumulate competent endoscopic experience. His responsibility for GI diseases focuses on surgical treatment using minimal access surgical techniques including surgical endoscopy in preoperative, intraoperative, and postoperative settings. This major assignment is a challenge for GI tract surgeons in the near future.

Source: EMBASE

Full Text:
Available in fulltext at EBSCOhost

42. Effectiveness of the clinical pathway to decrease length of stay and cost for laparoscopic surgery

Author(s): Uchiyama K., Takifuji K., Tani M., Onishi H., Yamaue H.

Citation: Surgical Endoscopy, November 2002, vol./is. 16/11(1594-1597), 0930-2794 (01 Nov 2002)

Publication Date: November 2002

Abstract: Background: Although clinical pathways have become popular strategies to improve the quality of medication in the field of laparoscopic surgeries, their economical effectiveness is not well defined. The aim of this study was to investigate the effect of clinical pathways for laparoscopic surgeries on cost and length of hospital stay. Methods: From January 2000 to June 2001, clinical pathways were introduced for laparoscopic surgeries, such as laparoscopic cholecystectomy (Lap. C, n = 210), laparoscopically assisted distal gastrectomy with Billroth-I reconstruction (Lap. B-I, n=33), and laparoscopically assisted colectomy (Lap. colon, n = 34). We compared total lengths of hospital stay and the economical efficiency before and after pathway implementation at Wakayama Medical University Hospital. Results: The length of hospital stay in Lap. C was shortened from 7.8 +/- 2.6 (mean +/- SD) days to 6.9 +/- 2.0 days (p = 0.03) and the total costs during hospitalization decreased from 509,320 +/- 58,800 to 489,130 +/- 43,860 (p = 0.009), resulting in less burden for patients. At the same time, the daily costs were increased from 66,230 +/- 8920 to 70,840 +/- 6820 (p = 0.0001), indicating that more
efficient medical care was being given to patients. Similar results were obtained in Lap. B-I and Lap. colon groups. Conclusions: In our study, the implementation of clinical pathways in the field of laparoscopic surgeries produced significant decreases in length of total hospital stay and cost while maintaining the quality of patient outcomes.

Source: EMBASE

43. Gastrectomy circumstances that influence early postoperative outcome

Author(s): Schwarz R.E., Zagala-Nevarez K.

Citation: Hepato-gastroenterology, November 2002, vol./is. 49/48(1742-1746), 0172-6390 (2002 Nov-Dec)

Publication Date: November 2002

Abstract: BACKGROUND/AIMS: Despite decreasing mortality, gastric resection is still a procedure of significant morbidity. METHODOLOGY: Factors predicting post-gastrectomy outcome over 3 years in a tertiary care cancer center, single-surgeon experience were analyzed. RESULTS: Thirty-four patients who underwent total or partial gastrectomy at the City of Hope Cancer Center between 11/1996 and 11/1999 were analyzed. There were 21 males and 13 females, with a median age of 61 years (range: 36-97). Diagnoses included gastric malignancy (n = 28), hemorrhage from diffuse gastritis (n = 4), gastric necrosis with perforation (n = 1), and an aortogastric fistula (n = 1). The operative intent was curative in 22, and palliative in 6 cancer patients. Procedures included total (n = 14), subtotal (n = 9), distal (n = 8), and proximal gastrectomy (n = 3). Reconstruction techniques were Roux-Y (n = 25), Billroth (n = 5), primary esophagogastric anastomosis (n = 3), and primary gastric closure (n = 1). Twenty patients had prior abdominal operations (59%); 10 underwent resection of additional organs (29%), including 2 splenectomies. The median lymph node count was 24, and 20 cancer patients had a R0 resection (71%). Postoperative complications occurred in 14 patients (41%; major: 26%), with 3 in-hospital deaths and one 90-day fatality (90-day mortality: 12%). Predictors of complications were benign diagnosis (p = 0.01), emergency procedure (p = 0.01), and splenectomy (prior or concurrent) (p = 0.02). Cancer diagnosis (vs. benign) and nonemergent gastrectomy (vs. emergency) were each associated with lower mortality (4 vs. 50%, p = 0.01), emergency procedure (p = 0.01), and splenectomy (prior or concurrent) (p = 0.02). Cancer diagnosis (vs. benign) and nonemergent gastrectomy (vs. emergency) were each associated with lower mortality (4 vs. 50%, p = 0.01), median length of stay (12 vs. 19 d, p = 0.02), and tube feed duration (7 vs. 194 d, p = 0.04). Gastrectomies for cancer with curative intent (vs. palliative or therapeutic) had no mortality (p = 0.004), a major complication rate of 14% (p = 0.02), and a median stay of 12 days (p = n.s.). For patients with gastric cancer, pathologic stage was the only multivariate predictor of survival (p = 0.04) at a median follow-up of 9 months (15 for survivors); a median survival for patients with potentially curable disease (stage IA-IIIB) has not yet been reached. CONCLUSIONS: Gastrectomies for cancer, especially when done electively with curative intent, can lead to excellent postoperative recovery. Palliative gastrectomies or emergency procedures for “benign” conditions have significantly more complicated outcomes.

Source: EMBASE

44. Gastrointestinal recovery and outcome after laparoscopy-assisted versus conventional open distal gastrectomy for early gastric cancer

Author(s): Mochiki E., Nakabayashi T., Kamimura H., Haga N., Asao T., Kuwano H.

Citation: World Journal of Surgery, September 2002, vol./is. 26/9(1145-1149), 0364-2313 (Sep 2002)

Publication Date: September 2002

Abstract: Laparoscopy-assisted gastrectomy has been increasingly reported as the treatment of choice for early gastric cancer. However, there is little information regarding the benefits of laparoscopy-assisted distal gastrectomy (LADG). LADG and conventional open distal gastrectomy (DG) for early gastric cancer were compared in terms of operative outcome, recovery of bowel function, complications, and changes in body weight. Thirty-four patients underwent LADG for early gastric cancer. These patients were compared with 31 patients who underwent DG during the same period. For estimating gastrointestinal motility recovery, 20 radiopaque markers were inserted into the duodenum during surgery, and abdominal X-rays were taken daily until all markers were seen in the ascending colon. Age, gender, and histologic differentiation of the lesions were matched. The LADG group
required a significantly longer operative time and the dissection of fewer lymph nodes. Postoperative hospital stay and the occurrence of postoperative complications (ileus) were significantly shorter and less frequent in the LADG group. The LADG group showed a more rapid recovery of gastrointestinal motor function compared with the DG group during the early postoperative period. Body weight 24 months after LADG was about 100% of pre-illness weight, but no further weight change was encountered in the DG group. For selected patients with early gastric cancer, LADG with lymphadenectomy can provide a rapid recovery and good quality of life without compromising the cure rate.

Source: EMBASE

45. Perioperative treatment after esophagogastic surgery [Hungarian] Tapasztalataink nyelocso- es kiterjesztett gyomormutetes betegek perioperativ kezeléseben

Author(s): Nagy K., Muranyi M., Nadas G., Tapolcsanyi E., Vimlati L.

Citation: Magyar sebeszet, June 2001, vol./is. 54/3(138-143), 0025-0295 (Jun 2001)

Publication Date: June 2001

Abstract: Extended gastric and esophageal resection is still associated with high postoperative morbidity and mortality. We performed a retrospective analysis of the perioperative management of 72 patients who had undergone such operations during a one-year period. Patient and management variables were analyzed by multivariate statistical methods to identify pre-, intra-, and postoperative factors which influence the results. The investigation of preoperative data revealed an increase of esophageal cancer among younger (< 55 years) patients (12 patients underwent gastrectomy and 22 esophageal resection). The intensity of smoking was significantly higher compared to the elderly (11.27 vs. 7.4 cigarettes/day; p < 0.05); and the same applies to alcohol consumption. In older patients (> 55 years of age), the duration of postoperative artificial ventilation was significantly longer (10.1 vs. 4 hours, p < 0.05) and the prevalence of septic complication was higher, than in younger patients. All three postoperative deaths recorded in this series occurred in the group of elderly patients. A preoperative weight loss exceeding 10 per cent of body weight was associated with significantly longer postoperative stay (21.6 vs. 17.4 days; p < 0.001), as well as with need for longer parenteral feeding (13.05 vs. 10.06 days; p < 0.005). Operations longer than 6 hours were associated with significantly longer postoperative ventilation period (14.44 vs. 5.31 hours; p < 0.02), need for longer stay intensive care unit (10.56 vs. 6.55 days; p < 0.001) and longer postoperative stay (21.56 vs. 17.64 days; p < 0.05). The prevalence of pulmonary complications was connected to the duration of the operation (10/16 vs. 3/55). We also describe and analyse two contemporary methods designed for monitoring circulatory parameters (PICCO) and tissue oxygenation (gastrotonometry). The analysis of postoperative data demonstrates that postoperative pain control with continuous epidural analgesia is superior to methods as it shortens the length of stay on the intensive care unit (7.15 vs. 10.67 days; p < 0.05) and postoperative hospitalisation (18.06 vs. 23.50 days; p < 0.05). Nutritional support is essential after esophageal anastomosis till oral feeding can start. Enteral nutrition was given through a jejunal tube that had been inserted intraoperatively. Calorie intake was built up step by step to a maintenance level of 31.2 kcal/day, which was administered until oral feeding could be started (mean duration 10.94 days; maximum duration: 42 days). We conclude that careful selection of patients, appropriate intra- and postoperative management, with adequate postoperative pain control can reduce postoperative morbidity and length of inpatient stay.

Source: EMBASE

46. Laparoscopic gastrostomy

Author(s): Adham M., Baulieux J.

Citation: Surgical endoscopy, May 2000, vol./is. 14/5(500), 0930-2794 (May 2000)

Publication Date: May 2000

Abstract: Although percutaneous endoscopic gastrostomy (PEG) has become a common technique for the placement of gastrostomy tubes, gastrostomy can be performed via the laparoscopic approach with minimal trauma or by using a percutaneous gastrostomy kit. In
this report, we describe two procedures for laparoscopic gastrostomy using standard instruments. Standard laparoscopic techniques are used to create a pneumoperitoneum. In the first method, three transparieto-transgastric U stitches are placed to surround the site selected for the gastrostomy. A Foley catheter is inserted through the abdominal and gastric opening, then tied to the stomach with a pursestring suture. Traction on the balloon catheter brings the stomach to the anterior abdominal wall, where the three U stitches can be tied. In the second method, a 9-cm vascularized isoperistaltic gastric tube is made on the greater curvature using an endoscopic linear cutter and preserving the gastro-omental vessels. This gastric tube is then brought out through the anterior abdominal wall via a trocar orifice, opened, and fixed to the skin as for standard ostomy. Laparoscopic gastrostomy is a straightforward procedure that reduces postoperative pain and ileus. It obviates the need for a laparotomy while creating an adequate gastrostomy. Postoperative recovery is prompt, with rapid return of intestinal function and early discharge from the hospital. It not only represents an alternative to PEG when this route is not suitable or after failure of the procedure, but can also be widely used for patients as a first choice.

Source: EMBASE

Some additional results:

47. Nutritional recovery after open and laparoscopic gastrectomies.


Citation: Gastric Cancer, June 2011, vol./is. 14/2(144-9), 1436-3291 (2011 Jun)

Publication Date: June 2011

Abstract: BACKGROUND: The aim of this study was to evaluate longitudinal changes in body composition after laparoscopic and open gastrectomies for gastric cancer. METHODS: Body mass, arm muscle mass, leg muscle mass, and fat mass were measured by performing a bioelectrical impedance analysis using a "Bodyscan" body composition analyzer (HXE19-JA; Konami, Tokyo, Japan) in 41 patients who had undergone gastrectomy: 14 patients underwent open distal gastrectomy, 8 patients underwent open total gastrectomy, and 19 patients underwent laparoscopy-assisted distal gastrectomy. All measurements were obtained preoperatively and at 1, 3, and 6 months after the operation. RESULTS: Fat mass decreased significantly throughout the 6-month period after distal gastrectomy and until 3 months after the laparoscopic surgery, while similar reductions in the total muscle mass and limb muscle mass were observed only in the first month after operation for all three groups. Patients with the laparoscopic approach had completely regained muscle mass at 6 months postoperatively. CONCLUSION: Both fat and muscle mass reductions were responsible for the body weight loss during the first postoperative month, whereas loss of fat mass contributed to further weight loss after that period. Enhanced recovery of muscle mass at 6 months after laparoscopic surgery suggests the benefit of this surgery, among other factors.

Source: MEDLINE

48. Gasless laparoscopy-assisted versus open resection for gastrointestinal stromal tumors of the upper stomach: preliminary results.

Author(s): Wu JM, Yang CY, Wang MY, Wu MH, Lin MT

Citation: Journal of Laparoendoscopic & Advanced Surgical Techniques. Part A, November 2010, vol./is. 20/9(725-9), 1092-6429;1557-9034 (2010 Nov)

Publication Date: November 2010

Abstract: INTRODUCTION: Gastrointestinal stromal tumors (GISTs) are rare neoplasms with malignant potential. Surgery is the definitive management for resectable nonmetastatic lesions. Although minimally invasive resection has been established for GISTs, it is still considered unfeasible when tumors are near the esophagogastric junction. This study aimed to compare the relative efficacy of gasless laparoscopy-assisted (GLA) and open approaches for resection of GISTs. PATIENTS AND METHODS: Between January 2006 and December 2008, 28 consecutive patients undergoing surgery for upper GIST were
reviewed retrospectively. Among these patients, 15 underwent GLA procedures and 13 underwent open surgeries.

**RESULTS:** Patient demographics, comorbidities, and tumor characteristics (mean tumor size and prognosis) were similar for both groups. All patients underwent wedge resection. The mean operating time (129.6 versus 110.8 minutes), mean estimated blood loss (35.5 versus 40.3 mL), mean day of first flatus (2.7 versus 3.2 days), mean tumor size (2.5 versus 2.6 cm), and tumor prognosis or complication rate (13.3% versus 7.7%) between the GLA and open surgery groups were not significantly different. The length of maximal wound \( P[\text{THIN SPACE}]<[\text{THIN SPACE}]0.001 \), visual analog scale on postoperative days 1 \( P[\text{THIN SPACE}]=[\text{THIN SPACE}]0.001 \), 2 \( P[\text{THIN SPACE}]=[\text{THIN SPACE}]0.001 \), and 3 \( P[\text{THIN SPACE}]=[\text{THIN SPACE}]0.001 \), the mean time for resuming oral intake \( P[\text{THIN SPACE}]=[\text{THIN SPACE}]0.028 \), and the length of hospital stay \( P[\text{THIN SPACE}]=[\text{THIN SPACE}]0.005 \) in the GLA group were significantly lesser than the corresponding values in the open surgery group. None of the patients had dysphagia or died.

**CONCLUSIONS:** GLA method is a safe and feasible procedure for resecting GISTs of the upper stomach. In addition, it offers better cosmetic results, less pain, and faster recovery.

**Source:** MEDLINE

**Full Text:**

Available in fulltext at EBSCOhost

49. **Fundoplication after laparoscopic Heller myotomy for esophageal achalasia: what type?**

**Author(s):** Patti MG, Herbella FA

**Citation:** Journal of Gastrointestinal Surgery, September 2010, vol./is. 14/9(1453-8), 1091-255X;1873-4626 (2010 Sep)

**Publication Date:** September 2010

**Abstract:** Because of the high success rate of minimally invasive surgery, a radical shift in the treatment algorithm of esophageal achalasia has occurred. Today, a laparoscopic Heller myotomy is the preferred treatment modality for achalasia. This remarkable change is due to the recognition by gastroenterologists and patients that a laparoscopic Heller myotomy gives better and more durable results than pneumatic dilatation and intrasphincteric injection of botulinum toxin injection, while it is associated to a short hospital stay and a fast recovery time. While there is agreement about the need of a fundoplication in conjunction to the myotomy, some questions still remain about the type of fundoplication: Should the fundoplication be total or partial, and in case a partial fundoplication is chosen, should it be anterior or posterior? The following review describes the data present in the literature in order to identify the best procedure that can achieve prevention or control of gastroesophageal reflux after a myotomy without impairing esophageal emptying.

**Source:** MEDLINE

50. **Safe and effective sedation in endoscopic submucosal dissection for early gastric cancer: a randomized comparison between propofol continuous infusion and intermittent midazolam injection.**

**Author(s):** Kiriyama S, Gotoda T, Sano H, Oda I, Nishimoto F, Hirashima T, Kusano C, Kuwano H

**Citation:** Journal of Gastroenterology, August 2010, vol./is. 45/8(831-7), 0944-1174;1435-5922 (2010 Aug)

**Publication Date:** August 2010

**Abstract:** PURPOSE: Endoscopic submucosal dissection (ESD) for early gastric cancer (EGC) generally takes longer to perform than conventional endoscopy and usually requires moderate/deep sedation with close surveillance for patient safety. The aim of this study was to compare the safety profiles and recovery scores propofol continuous infusion and intermittent midazolam (MDZ) injection as sedation for ESD.METHODS: Sixty EGC patients scheduled for ESDs between August and November 2008 were included in this prospective study and randomly divided into a propofol (P-group, 28 patients) and an MDZ...
(M-group, 32 patients) group using an odd-even system. The P-group received a 0.8 mg/kg induction dose and a 3 mg/kg/h maintenance dose of 1% propofol using an infusion pump. All patients received 15 mg pentazocine at the start of the ESD and at 60-min intervals thereafter. We recorded and analyzed blood pressure, oxygen saturation and heart rate during and following the procedure and evaluated post-anesthetic recovery scores (PARS) and subsequent alertness scores.

RESULTS: The propofol maintenance and total dose amounts were (mean +/- standard deviation) 3.7 +/- 0.6 mg/kg/h and 395 +/- 202 mg, respectively. The mean total dose of MDZ was 10.3 +/- 4.5 mg. There were no cases of desaturation <90% or hypotension <80 mmHg in either group. Alertness scores 15 and 60 min after the procedures were significantly higher in the P-group (4.9/4.9) than in the M-group (4.6/4.5; p < 0.05). The mean PARS 15 and 30 min after the ESDs were significantly higher in the P-group (9.6/9.9) than in the M-group (8.6/9.2; p < 0.01).

CONCLUSION: Based on our results, the ESDs for EGC performed under sedation using propofol continuous infusion were as safe as those performed using intermittent MDZ injection. Propofol-treated patients had a quicker recovery profile than those treated with MDZ. We therefore recommend the use of continuous propofol sedation for ESD, but sedation guidelines for the use of propofol are necessary.

Source: MEDLINE

Full Text:
Available in fulltext at EBSCOhost

51. Comparison of long-term outcomes of laparoscopy-assisted and open distal gastrectomy for early gastric cancer.

Author(s): Lee JH, Yom CK, Han HS

Citation: Surgical Endoscopy, August 2009, vol./is. 23/8(1759-63), 0930-2794;1432-2218 (2009 Aug)

Publication Date: August 2009

Abstract: BACKGROUND: Application of laparoscopy-assisted distal gastrectomy (LADG) for early gastric cancer (EGC) is still controversial because of scant evidence of long-term safety and feasibility. We evaluated the long-term outcome of LADG compared with conventional open distal gastrectomy (ODG) for EGC.

METHODS: Between March 1999 and July 2006, 106 patients underwent LADG and 105 patients underwent ODG for EGC. Clinicopathologic characteristics, postoperative outcomes, hospital course, postoperative morbidity, postoperative mortality, and long-term outcomes, including cancer recurrence and survival, were retrospectively compared between the two groups. Survival of all patients was confirmed with 55-month median follow-up.

RESULTS: Postoperative recovery was significantly faster in the LADG group; passing flatus occurred earlier, starting a liquid diet began sooner, and postoperative hospital stay was shorter (p < 0.05). Mean operation time was significantly longer in the LADG group. Postoperative complications in the LADG group occurred less frequently compared with in the ODG group (4.7% versus 13.3%, p = 0.046). Tumor recurrence occurred in two cases (0.9%) and death related to recurrence occurred in only one patient (0.5%). Overall 5-year survival rate (5-YSR) of all patients was 95.5%, while disease-specific 5-YSR was 98.8%. There was no significant difference in survival rates between the two groups; overall 5-YSR of the ODG and LADG groups was 94.9% and 95.9%, respectively.

CONCLUSIONS: Our data suggest that LADG for EGC is feasible and safe. We expect the results of the present study to be confirmed by prospective randomized analysis.

Source: MEDLINE

Full Text:
Available in fulltext at EBSCOhost

52. Laparoscopic esophagogastrectomy devascularization in bleeding varices.

Author(s): Helmy A, Abdelkader Salama I, Schwartzberg SD

Citation: Surgical Endoscopy, October 2003, vol./is. 17/10(1614-9), 0930-2794;1432-2218 (2003 Oct)
Abstract: BACKGROUND: Bleeding from esophageal varices is the major cause of death in patients with portal hypertension. The ideal surgical procedure should effectively control bleeding and maintain liver function with low rates of encephalopathy. Based on this objective, laparoscopic devascularization of the lower esophagus and upper stomach was studied.

METHODS: Eighteen patients were studied prospectively who underwent a laparoscopic esophagogastroduodenal devascularization procedure for variceal hemorrhage. The diaphragmatic hiatus and esophagus are dissected. The lower 7 or 8 cm of esophagus is devascularized. Devascularization of the gastric fundus is then accomplished by meticulous dissection and ligation of the short gastric vessels. The hepatogastric ligament is opened, permitting identification and isolation/ligation of the left gastric vessels. The dissection and ligation of the vessels at lesser curvature proceeded up to the diaphragmatic hiatus with devascularization of the external varices from the retroperitoneum or mediastinum at the esophagogastric junction.

RESULTS: Mean operating room time was 111 min (range, 80-140 min) (6 emergent/12 elective). Mean blood loss 388 ml (range, 150-650 ml). Intensive care unit stay averaged 48 h, with a mean hospitalization of 11 days. Liver function and coagulation parameters remained stable postoperatively. Duplex sonography on the portal and splenic veins revealed patency in all patients. The flow velocity in the portal vein decreased from 15.5 +/- 4.1 to 13.4 +/- 3.5 cm/s postoperatively ( p = 0.021). Splenic vein velocity was unchanged. Bleeding recurred in 6 patients, and grade 1 encephalopathy developed in 1 patient. Follow-up endoscopy (8-24 months) demonstrated substantial reduction in variceal grade.

CONCLUSION: Laparoscopic devascularization of the lower esophagus and the upper stomach is technically feasible and promising. Rapid recovery and control of variceal hemorrhage are accomplished in most patients without exposing them to the risk of open surgery.

Source: MEDLINE

Full Text: Available in fulltext at EBSCOhost
57. **Usefulness of enhanced recovery** after surgery protocol as compared with conventional perioperative care in gastric surgery

T Yamada, T Hayashi, H Cho, T Yoshikawa... - Gastric Cancer, 2011 - Springer

... Consensus review of optimal perioperative care in colorectal surgery: Enhanced Recovery After Surgery (ERAS) Group recommendations. ... Wang D, Kong Y, Zhong B, Zhou X, Zhou Y. Fast-track surgery improves postoperative recovery in patients with ... ERAS in gastric surgery ...

58. **Clinical observation on fast restoration of gastrointestinal function after gastrectomy with Billroth II reconstruction for distal gastric cancer**

H Xinyang, H Qiang, Z Zhiqiang - Acta Universitatis Medicinalis ..., 2010 - en.cnki.com.cn

... Yanping, etc (Hunan provincial people's Hospital, Changsha 410007); Study for the effect of enhanced recovery by early ... Nanjing General Hospital of Nanjing Military Command, PLA, Nanjing 210002, Jiangsu, China): Fast-track surgery in laparoscopic gastrectomy for gastric ...

59. **Association of Operating Time and Gastrectomy with Initiation of Postoperative Oral Food Intake**

K Kuwabara, S Matsuda, KB Ishikawa... - Digestive ..., 2011 - content.karger.com


60. **Reduction of hospital stay and cost after the implementation of a clinical pathway for radical gastrectomy for gastric cancer**

JBY So, ZL Lim, HA Lin... - Gastric Cancer, 2008 - Springer

... The key principles of these enhanced recovery programs are adequate analgesia, early ambulation, and early resumption of oral intake [5, 8]. Radical ... Fast track surgery, ... Influence of surgical subspecialty training on in-hospital mortality for gastrectomy and colectomy patients ...

61. **Is the critical pathway effective for the treatment of gastric cancer?** Sang-Ho Jeong, Moon-Won Yoo, 2 Hong-Man Yoon, Hyuk-Joon Lee, Hye Sung Ahn, Jae-Jin Cho,...


... Implementation of a Fast-Track clinical pathway decreases postoperative length of stay and hospital charges for liver resection. ... Safety of modified double-stapling end-to-end gastroduodenostomy in distal subtotal gastrectomy. J Surg Oncol 2007;96:624–629. 17 ...

62. **Feasibility Study of Early Oral Intake after Gastrectomy for Gastric Carcinoma**

DH Jo, O Jeong, JW Sun... - Journal of Gastric ..., 2011 - synapse.koreamed.org

... of immediate enteral nutrition on metabolic responses to major colorectal surgery in an enhanced recovery protocol. ... Morbidity and mortality after radical gastrectomy for patients with carcinoma of the stomach. ... Evidence-based surgical care and the evolution of fast-track surgery ...

63. A meta-analysis of prospective randomized trials comparing minimally invasive and
open distal gastrectomy for cancer
L Zorcolo, AS Rosman, M Pisano... - Journal of Surgical ..., 2011 - Wiley Online Library
... plication rates, the advantages of laparoscopy did not translate into enhanced recovery from surgery. ... must be implemented in a multi-modal approach for fast-track surgery, which ... et al.: Laparoscopy- assisted Billroth I gastrectomy compared with conventional open gastrectomy. ...
Related articles - All 3 versions

64. Fast-Track Concepts in Major Open Upper Abdominal and Thoracoabdominal Surgery: A Review
M Fagevik Olsén... - World Journal of Surgery, 2011 - Springer
... Example of the literature search in MEDLINE/Pub Med: ERAS OR enhanced recovery after surgery OR fast-track OR multimodal rehabilitation AND upper abdominal surgery OR gastrectomy OR liver surgery OR liver resection OR pancreas surgery OR pancreas ...
Cited by 1 - Related articles - All 2 versions

65. The concept of fast-track surgery in laparoscopic surgical nursing
... PLA,Nanjing 210002,Jiangsu,China);Fast-track surgery in laparoscopic gastrectomy for gastric cancer ... 210002,China;Laparoscopic stoma apothesis on the concept of fast track surgery;with ... people's Hospital,Changsha 410007);Study for the effect of enhanced recovery by early ...
Cached

66. Laparoscopic versus open distal gastrectomy for locally advanced gastric cancer: a case–control study
M Scatizzi, KC Kröning, E Lenzi, L Moraldi... - Updates in Surgery, 2011 - Springer
Cited by 2 - Related articles - All 3 versions

67. Evidence-based perioperative management: strategic shifts in times of fast track surgery
SS CHOPRA, SC SCHMIDT... - Anticancer ..., 2009 - ar.iiarjournals.org
Cited by 4 - Related articles - All 4 versions

68. The nutritional management of surgical patients: enhanced recovery after surgery
KCH Fearon... - ... -NUTRITION SOCIETY OF LONDON, 2003 - Cambridge Univ Press
... CH Fearon and R. Luff807 8115 Nutrition Society 2003 ... context of traditional peri operative care will be compared with that for enhanced recovery following surgery. ... He demonstrated in patients undergoing partial gastrectomy for complicated peptic ulcer disease that those who ...
Cited by 62 - Related articles - BL Direct - All 7 versions