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CLINICAL SCIENCE

807 Enhanced Postoperative Recovery Pathways in Emergency Surgery: A Randomised Controlled Clinical Trial

Murat Gonenc, Ahmet Cem Dural, Ferhat Celik, Cevher Akarsu, Ali Kocatas, Mustafa Uygur Kalayci, Yasar Dogan, and Halil Alis

The feasibility of enhanced postoperative recovery pathways in selected patients with perforated peptic ulcer disease who undergo laparoscopic Graham patch repair was investigated in this randomized controlled clinical trial.

815 Invited Commentary: Re: Gonenc M, Dural AC, Celik F, et al: Enhanced Postoperative Recovery Pathways in Emergency Surgery: A Randomized Controlled Clinical Trial

David V. Feliciano

817 Reducing the Rate of Catheter-Associated Bloodstream Infections in a Surgical Intensive Care Unit Using the Institute for Healthcare Improvement Central Line Bundle

Greg D. Sacks, Brian S. Diggs, Pantelis Hadjizacharia, Donald Green, Ali Salim, and Darren J. Malinoski

Implementation of the Institute for Healthcare Improvement Central Line Bundle reduced the rate of central line-associated bloodstream infections by 68% in a surgical intensive care unit in a county hospital. This intervention, even in resource poor settings, has the potential for dramatic reduction of morbidity and cost savings.

824 Metastatic Lymph Node Ratio in Stage III Rectal Carcinoma Is a Valuable Prognostic Factor Even With Less Than 12 Lymph Nodes Retrieved: A Prospective Study

Khaled M. Madbouly, Khaled S. Abbas, and Ahmed M. Hussein

Prospective study included 115 patients with stage III rectal cancer after neoadjuvant chemoradiation, curative resection, and postoperative adjuvant therapy (5-fluorouracil and leucovorin). The mean number of examined LNs was 12.1, and the mean number of metastatic LNs was 3.5. The mean MLNR was .37. The mean duration of follow-up was 37 months. overall mortality was 34.8% while cancer-specific mortality was 27%. Multivariate analysis proved that MLNR was the only independent risk factor for both mortality and recurrence. Prognostic capability was not affected by having 12 nodes retrieved. The best sensitivity and specificity of MLNR as a prognostic factor for both

tumor recurrence and overall survival were achieved at a cutoff value of .375.

832 Readmission After Delayed Diagnosis of Surgical Site Infection: A Focus on Prevention Using the American College of Surgeons National Surgical Quality Improvement Program

Angela Gibson, Sarah Tevis, and Gregory Kennedy

A diagnosis of surgical site infection after discharge leads to potentially preventable readmissions in otherwise healthy individuals. A focus on discharge education and a close follow-up are necessary to avoid readmission.

840 Oncologic Impact of Anastomotic Leakage in Rectal Cancer Surgery According to the Use of Fibrin Glue: Case-Control Study Using Propensity Score Matching Method

Hun Jin Kim, Jung Wook Huh, Hyeong Rok Kim, and Young Jin Kim

Anastomotic leakage is an independent prognostic factor for survival and recurrence in rectal cancer patients after curative surgery. Fibrin glue was associated with a lower rate of leakage without oncologic advantages.

847 Prognostic Factors Influencing Event-Free Survival and Treatments in Desmoid-Type Fibromatosis: Analysis From a Large Institution

Kai Huang, Chun Meng Wang, Jing Gui Chen, Chun Yan Du, Ye Zhou, Ying Qiang Shi, and Hong Fu

Tumor size and a history of recurrence are independent predictors of EFS. Surgery is warranted if it can be R0 and function sparing.

855 Patient Experiences After Hospitalizations for Elective Surgery

Keiki Hinami, Karl Y. Bilimoria, Peter G. Kallas, Yael M. Simons, Nicholas P. Christensen, and Mark V. Williams

In this prospective observational study based at an academic surgical referral center, patients who underwent elective surgery reported surgical complications as the primary reason for postdischarge emergency room visits and rehospitalizations.

863 Anatomic Resection Reduces the Recurrence of Solitary Hepatocellular Carcinoma ≤ 5 cm Without Macrovascular Invasion

Atsushi Kudo, Shinji Tanaka, Daisuke Ban, Satoshi Matsumura, Takumi Irie, Noriaki Nakamura, and Shigeki Arai

Anatomic resection may be recommended for the small solitary hepatocellular carcinoma without macro-vascular invasion to avoid the recurrence of disease.

870 Cognitive Function After Bariatric Surgery: Evidence for Improvement 3 Years After Surgery

Michael L. Alosco, Rachel Galioto, Mary Beth Spitznagel, Gladys Strain, Michael Devlin, Ronald Cohen, Ross D. Crosby, James E. Mitchell, and John Gunstad

Severe obesity is a significant risk factor for cognitive impairment. This study shows that bariatric surgery may lead to lasting improvements in cognitive function up to 3 years postoperatively. Future research is needed to elucidate the mechanisms for these improvements and examine whether bariatric surgery can reduce the risk of accelerated cognitive decline or Alzheimer disease.

877 The Better Effect of Roux-En-Y Gastrointestinal Reconstruction on Blood Glucose of Nonobese Type 2 Diabetes Mellitus Patients

Weijie Chen, Zhibo Yan, Shaozhuang Liu, Guangyong Zhang, Dong Sun, and Sanyuan Hu

To investigate the effect of Roux-en-Y gastrointestinal reconstruction (RYGR) and Billroth I reconstruction (B1R) on improving glucose in nonobese type 2 diabetes mellitus (T2DM) patients, we retrospectively analyzed the data of 76 patients and measured the level of fasting plasma ghrelin and glucagon-like peptide 1. The results show that RYGR can more effectively improve the glucose level of T2DM than B1R in nonobese patients. Thus, it might be preferable in subtotal gastrectomy for T2DM patients.

882 D-Shape Asymmetric and Symmetric Excision With Primary Closure in the Treatment of Sacrococcygeal Pilonidal Disease

Paolo Limongelli, Luigi Bruscianno, Crescenzo Di Stazio, Gianmattia del Genio, Salvatore Tolone, Francesco S. Lucido, Vincenzo Amoroso, Antonio D'Alessandro, Giovanni Docimo, and Ludovico Docimo

A theoretical option aiming to improve surgical outcomes and reduce the median recurrence rate is to lateralize the natal cleft. D-shaped asymmetric excision is an effective treatment for sacrococcygeal pilonidal disease. After a median of 11 years' follow-up, a better long-term recurrence rate was achieved compared with symmetric excision when stratified for several features known to be related to disease-free survival.

890 Trends in Surgical Results of Hepatic Resection for Hepatocellular Carcinoma: 1,000 Consecutive Cases Over 20 Years in a Single Institution

Yo-ichi Yamashita, Eiji Tsujita, Kazuki Takeishi, Teruyoshi Ishida, Toru Ikegami, Takuhiro Ezaki, Takashi Maeda, Tohru Utsunomiya, Naofumi Nagasue, Ken Shirabe, and Yoshihiko Maehara

According to trends of our 1,000 consecutive cases, surgical results of hepatic resections for HCC were

significantly improved, with the mortality rate nearly reaching 0% and the 5-year survival rate nearly reaching 80%, but the consistently high rate of HCC recurrence after hepatic resection remains a problem.

897 Routine Upper Gastrointestinal Swallow Studies After Laparoscopic Sleeve Gastrectomy Are Unnecessary

Reinhard Mittermair, Robert Sucher, Alexander Perathoner, and Heinz Wykypiel

In summary, UGI series on POD 1 cannot assess the integrity of the gastric remnant. It is our opinion that early UGI series is not required as a routine procedure in all operated patients. CT swallow study should be performed in patients who develop clinical signs and symptoms of complications such as tachycardia, pain or fever.

902 Preoperative Evaluation of Thyroglossal Duct Cysts: Children Versus Adults—Is There a Difference?

Anuradha R. Bhama, Richard J. Smith, Robert A. Robinson, Ronald J. Weigel, Sonia L. Sugg, James R. Howe, and Geeta Lal

A thyroglossal duct cyst, often a clinical diagnosis in children, also occurs in the adult population. This study compares the preoperative workup of both children and adults at a tertiary care institution with regard to imaging and examines the postoperative outcomes of patients who have undergone excision.

907 Pilonidal Disease in a Military Population: How Far Have We Really Come?

Emilie B. Fitzpatrick, Patrick M. Chesley, Morohunranti O. Oguntoye, Justin A. Maykel, Eric K. Johnson, and Scott R. Steele

Pilonidal disease is prevalent among military personnel and has long been a source of significant morbidity and recurrence within this population. The authors identified patient and surgical factors contributing to disease recurrence and complications after surgical treatment for pilonidal disease in a military population. although certain patient-related and disease-related factors portend a worse prognosis, black race and operative method were the strongest predictors of outcomes.

915 Predictive Factors for Failure of Percutaneous Drainage of Postoperative Abscess After Abdominal Surgery

Fulgence Kassi, Anthony Dohan, Philippe Soyer, Eric Vicaut, Mourad Boudiaf, Patrice Valleur, and Marc Pocard

We found that percutaneous imaging-guided drainage is a feasible, safe, well-tolerated, and effective method for the treatment of postoperative abdominopelvic abscess, with an overall success rate of 78%. Residual collection after a first drainage is an independent predictor of unfavorable outcome.

922 Comparison of Clinicopathological Characteristics and Prognosis Between Early and Late Recurrence After Curative Surgery for Colorectal Cancer

Yuan-Tzu Lan, Shih-Ching Chang, Shung-Haur Yang, Chun-Chi Lin, Huann-Sheng Wang, Jeng-Kai Jiang, Wei-Shone Chen, Tzu-Chen Lin, Shih-Hwa Chiou, and Jen-Kou Lin

Early recurrence does not indicate a worse outcome in colorectal cancer. Patients received resection of metastatic lesions had a longer post-recurrence survival compared with those who did not.

931 Emergency Department Pericardial Drainage for Penetrating Cardiac Wounds is a Viable Option for Stabilization

Teresa S. Jones, Clay Cothren Burlew, Robert T. Stovall, Fredric M. Pieracci, Jeffrey L. Johnson, Gregory J. Jurkovich, and Ernest E. Moore

In this population of patients with penetrating cardiac injuries, pericardial drainage in the emergency department had an acceptably low mortality rate compared to other management options. Pericardial drainage in the emergency department is a viable option for stabilization before definitive surgery when surgical intervention is not immediately available in the hemodynamically marginal patient. Early pericardial drainage in patients with penetrating cardiac injuries does not negatively affect patient outcomes.

935 Perioperative Intensive Insulin Therapy Using an Artificial Endocrine Pancreas With Closed-Loop Glycemic Control System: The Effects of No Hypoglycemia

Kazuhiro Hanazaki, Hiroyuki Kitagawa, Tomoaki Yatabe, Masaya Munekage, Ken Dabanaka, Yuka Takezaki, Yuuki Tsukamoto, Takuji Asano, Yoshihiko Kinoshita, and Tsutomu Namikawa

Intensive insulin therapy (IIT) with open-loop system inevitably results in hypoglycemia, which is very serious in critically ill patients. Perioperative IIT using an artificial pancreas with a closed-loop glycemic control system can be used to prevent hypoglycemia and maintain stable glycemic control with less variability of blood glucose concentration. The success of this control is unrelated to operative method used.

942 Pre-Resection Gastric Bypass Reduces Post-Resection Body Mass Index But Not Liver Disease in Short Bowel Syndrome

Jon S. Thompson, Rebecca A. Weseman, Fedja A. Rochling, Wendy J. Grant, Jean F. Botha, Alan N. Langnas, and David F. Mercer

Obese patients developing short bowel syndrome (SBS) maintain a higher body mass index (BMI) and have increased risk of hepatobiliary complications. In this study, pre-resection gastric bypass (GBP) prevents the nutritional benefits of obesity but does not eliminate the increased risk of hepatobiliary disease in obese SBS patients. This occurs independent of pre-SBS BMI suggesting the importance

of GBP itself or history of obesity rather than weight loss.

949 Successful Interventions to Reduce First-Case Tardiness in Dutch University Medical Centers: Results of a Nationwide Operating Room Benchmark Study

Elizabeth van Veen-Berkx, Sylvia G. Elkhuisen, Cor J. Kalkman, Wolfgang F. Buhre, and Geert Kazemier

Nationwide benchmarking can be applied to identify and measure the effectiveness of interventions to reduce first-case tardiness in a university hospital OR environment. The implemented interventions in 4 centers were successful in significantly reducing first-case tardiness.

960 Evaluation of Chest Tube Administration of Tissue Plasminogen Activator to Treat Retained Hemothorax

P. J. Stiles, Rachel M. Drake, Stephen D. Helmer, Paul M. Bjordahl, and James M. Haan

Retained traumatic hemothorax is often a difficult complication to deal with and there is no consensus on the optimal treatment approach. A review of our trauma center's experience with intrapleural tPA for the treatment of retained traumatic hemothoraces demonstrated clinical resolution of hemothorax in all patients, no bleeding complications, and a low rate of patients requiring operative intervention. Intrapleural tPA is a safe and effective treatment for retained traumatic hemothoraces, especially in patients who present or are diagnosed in a delayed fashion.

964 Standardized Methodological Assessment of Research Presentations (SHARP): Development of a New Instrument

Forough Farrokhyar, Deepak Dath, Nalin Amin, Mohit Bhandari, Stephen Kelly, Ann Kolklin, Catherine Gill Pottruff, and Susan Reid

SHARP is a simple, short, and reliable instrument to assess the quality of the scientific merits of the presented surgical evidence as well as the presentation style/skills employed in delivering that evidence. We recommend that researchers focus on presenting the key concepts of their evidence using visually simple slides in a professionally engaging manner for effective delivery of their research and better communication with the audience.

974 Quality of Life After Thyroid Surgery in Women With Benign Euthyroid Goiter: Influencing Factors Including Hashimoto's Thyroiditis

Regina Promberger, Michael Hermann, Shanon Joan Pallikunnel, Rudolf Seemann, Moritz Meusel, and Johannes Ott

In women with benign euthyroid goiter with or without increased preoperative anti-thyroid peroxidase antibody levels, thyroid surgery does not lead to an improvement in health-related quality of life. However, patients with histologically confirmed

Contents continued

Hashimoto's thyroiditis might benefit in terms of quality of life.

REVIEWS

980 **Meta-Analysis of Sublay Versus Onlay Mesh Repair in Incisional Hernia Surgery**

Lucas Timmermans, Barry de Goede, Sven M. van Dijk, Gert-Jan Kleinrensink, Johannes Jeekel, and Johan F. Lange

Incisional hernia (IH) remains a very frequent postoperative complication. However, no consensus has been reached as to which technique is superior. In this meta-analysis comprising a total of 1,948 patients, onlay repair (OR) was compared with sublay repair (SR). A trend was observed in favour of SR with regards to lower IH recurrence rates. In addition SR achieved significantly lower surgical site infection rate. Sublay seems the preferred technique for IH repair.

989 **Amyand's Hernia: A Review**

Adamantios Michalinos, Demetrios Moris, and Spiridon Vernadakis

Amyand's hernia is the protrusion of the vermiform appendix in an inguinal hernia. Its clinical image is usually that of an incarcerated hernia. Its treatment includes hernioplasty with or without appendectomy or hernia repair.

EDITORIAL OPINION

996 **A Proposal to Reroute and Reform the Healthcare Money Trail**

James J. Rice and Dennis W. Harris

Without fundamental changes healthcare costs will continue to accelerate faster than the gross domestic product while consuming larger portions of individual and corporate incomes. Although the acceleration is slowing and is projected to slow for multiple reasons, the curve remains in the wrong direction and far too high. Although these problems are widely acknowledged, we believe that there are underappreciated defects driving these undesirable events. The essence of those defects is that the major portion of the money is outside the control of the patients and competitive pricing is outside the

control of the providers. The Patient Protection and Affordable Care Act ("Obama Care") of 2010 dealt with some of the waste within the system (eg, quality and efficiencies of care) but it does not address the inefficiencies of the system itself since it rejects patient responsibility and continues price controls and price fixing by a select group. Our plan acknowledges the importance of maximum access, quality, and efficiency but includes personal responsibility and cost competition. We propose that the patients have virtual, dynamically allocated, evidence-based budgets grounded on their medical conditions and the patients authorize the transfer of funds to the providers while the providers compete on quality and price. A patient's "bonus" depends on their performance while individual budget overruns are not individually punished. Furthermore, we advocate all funding of health care be via taxes linked to expenditures to replace and reduce the total healthcare "premiums" and decouple health care from employment as it is archaic and hinders employment. This proposal reassigns the control of money from the government, corporations, and special interest groups and returns it to the control of the patients. Although anecdotal instances exist of a substantial positive impact, this proposal is in need of demonstration projects, further analysis, and discussion.

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1000 **Diagnosing Acute Appendicitis: Is There Any Role of Ultrasonography?**

Jyotindu Debnath, Vivek Sharma, and Samar Chatterjee

1002 **Hernia Repair: Do You Know Your Own Results?**

Arthur I. Gilbert

1003 **Factors Influencing Clinical Results in Colon Surgical Resection: Surgeon, Volume of Cases and Now Day of the Week?**

David Parés

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