

SURGERY

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INSTITUTIONAL INNOVATION

- 717 **Surgical innovation as the driver of change in academic surgery**
M. Jain, MD, B.L. Gewertz, MD

EDUCATION

Presented at the Academic Surgical Congress 2019

- 721 **Reflections on a leadership development program: Impacts on culture in a surgical environment**
C. Ann Vitous, MA, MPH, CPH, S. Shubeck, MD, MS, A. Kanters, MD, MS, M. Mulholland, MD, PhD, J.B. Dimick, MD, MPH

This study explored the impacts of implementing a leadership development program on the culture of the Department of Surgery at the University of Michigan (Ann Arbor). These findings are important for determining strategies for collaboration in team-based approaches to health care.

Presented at the Academic Surgical Congress 2019

- 726 **The future of general surgery training: A Canadian resident nationwide Delphi consensus statement**
C. Huynh, MD, N. Wong-Chong, MD, MSc, FRCSC, P. Vourtzoumis, MD, MSc, S. Lim, MD, W. Marini, MD, MSc, G. Johal, MD, FRCSC, M. Strickland, MD, MBA, FRCSC, A. Madani, MD, PhD, FRCSC, On behalf of the Canadian Association of General Surgeons (CAGS) Resident Committee

Our aim was to develop a Delphi consensus statement on the perceptions of Canadian surgery residents regarding improvements needed in surgery residency training programs. This article is important, because the perceptions of surgery residents can inform and help to implement these suggestions into the guidelines and national curriculum for residency training programs in general surgery.

Presented at the Academic Surgical Congress 2019

- 735 **Gender differences among surgical fellowship program directors**
A.C. Filiberto, MD, C.B. Le, MD, T.J. Loftus, MD, L.A. Cooper, PhD, C. Shaw, MD, MS, G.A. Sarosi Jr., MD, A. Iqbal, MD, S.A. Tan, MD, PhD

Our findings suggest that women are underrepresented among surgical fellowship program directors. More work must be done to increase gender equality in surgery, beginning with disseminating evidence and raising awareness.

Presented at the Academic Surgical Congress 2019

- 738 **The effect of gender on operative autonomy in general surgery residents**
S.L. Meyerson, MD, D.D. Odell, MD, J.B. Zwischenberger, MD, M. Schuller, MEd, R.G. Williams, PhD, J.D. Bohnen, MD, G.L. Dunnington, MD, L. Torbeck, PhD, J.T. Mullen, MD, S.P. Mandell, MD, M.A. Choti, MD, E. Foley, MD, C. Are, MD, E. Auyang, MD, J. Chipman, MD, J. Choi, MD, A.H. Meier, MD, D.S. Smink, MD, MPH, K.P. Terhune, MD, P.E. Wise, MD, N. Soper, MD, K. Lillemoe, MD, J.P. Fryer, MD, B.C. George, MD, on behalf of the members of the Procedural Learning and Safety Collaborative

This study highlights the differences in the operative autonomy given to male general surgery residents compared with female general surgery residents based on evaluations provided by both the attending surgeon and the resident. This study is important because addressing this gender gap in the progression of autonomy provides an opportunity for institutional and departmental discussion about the origins of this disparity and ways to lessen the gap.

OUTCOMES

- 744 **Postoperative opioid prescribing is not my job: A qualitative analysis of care transitions**
M.P. Klueh, BS, K.R. Sloss, BS, L.A. Dossett, MD, MPH, M.J. Englesbe, MD, J.F. Waljee, MD, MPH, MS, C.M. Brummett, MD, P.A. Lagisetty, MD, J.S. Lee, MD

This qualitative study describes transitions of care for postoperative opioid prescribing and identifies targets for intervention. The importance of this report could improve care coordination for patients with persistent postoperative opioid use.

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Presented at the Academic Surgical Congress 2019

- 752 **Opioid utilization in minimally invasive versus open inguinal hernia repair**
A.W. Knight, MD, E.B. Habermann, MPH, PhD,
D.S. Ubl, MPH, M.D. Zielinski, MD, FACS,
C.A. Thiels, DO, MBA
- This study evaluated opioid use in inguinal hernia repair patients to optimize discharge prescribing practices for this common procedure. Postdischarge opioid utilization was clinically similar between patients undergoing open and minimally invasive surgery inguinal hernia repair and those requiring unilateral or bilateral repair. The data suggest that only 8 oxycodone tablet equivalents are needed at discharge.

Presented at the Academic Surgical Congress 2019

- 758 **No refills: The durable impact of a multifaceted effort by surgical trainees to minimize the prescription of postoperative opioids**
A.S. Chiu, MD, MPH, M.R. Freedman-Weiss, MD,
R.A. Jean, MD, E. Cohen, PharmD, P.S. Yoo, MD
- A comprehensive, multifaceted program to reduce postoperative opioid prescribing decreased prescriptions by half. This report demonstrate that simple, cost-effective initiatives can have significant and long-lasting impacts on prescribing behavior of providers, which has larger positive implications in the opioid epidemic and our communities at large.

Presented at the Academic Surgical Congress 2019

- 764 **Quality assessment of the literature on surgical quality improvement**
O.A. Sacks, BA, A.J. Lambour, MD, A.R. Wilcox, MD,
S. Nammalwar, BS, S.L. Wong, MD, MS
- Surgical quality improvement publications are of poor quality. The importance of this report is that guidelines such as Standards for QUality Improvement Reporting Excellence 2.0 are not being utilized to report quality improvement work, but have the potential to improve surgical quality improvement design and reporting.

- 769 **Active involvement of family members in postoperative care after esophageal or pancreatic resection: A feasibility study**
A.M. Schreuder, MD, A.M. Eskes, RN, PhD,
R.G.M. van Langen, MPA, S. van Dieren, PhD,
E.J.M. Nieveen van Dijkum, MD, PhD
- In this study, a program in which relatives of patients undergoing major surgery participated in postoperative care was feasible. This program has the potential to improve quality of care by improving patient satisfaction and clinical outcomes.

Presented at the Academic Surgical Congress 2019

- 778 **Impact of hospital safety-net status on failure to rescue after major cardiac surgery**
Y. Sanaiha, MD, S. Rudasill, BA, S. Sareh, MD,
A. Mardock, BS, H. Khoury, BS, B. Ziaieian, MD, PhD,
R. Shemin, MD, P. Benharash, MD
- We performed a national analysis of failure to rescue after cardiac surgery in safety-net hospitals. The importance of this report is that no other national study to our knowledge has examined FTR at safety-net institutions.

Presented at the Academic Surgical Congress 2019

- 785 **Race, gender, and language concordance in the care of surgical patients: A systematic review**
C. Zhao, AB, P. Dowzicky, MD, L. Colbert, MSN, CRNP,
S. Roberts, MD, R.R. Kelz, MD, MSCE, MBA
- This systematic review finds that patients prefer cultural and clinical competency over patient-provider concordance. This finding suggests that we should tackle surgical disparities by prioritizing efforts to train physicians in cultural competency.

Presented at the Academic Surgical Congress 2019

- 793 **Treatment of appendicitis: Do Medicaid and non-Medicaid-enrolled patients receive the same care?**
A. Fazzalari, MD, N. Pozzi, MD, D. Alfego, PhD,
N. Erskine, BA, Q. Shi, MS, G. Tourony, BA, J. Mathew, PhD,
D. Litwin, MD, MBA, M.A. Cahan, MD, MBA
- This retrospective review of adults with appendicitis in Massachusetts revealed similar outcomes between patients with and without Medicaid. This is important because earlier studies have shown that insurance type drives a disparity in care.

Presented at the Academic Surgical Congress 2019

- 800 **National trends in centralization and perioperative outcomes of complex operations for cancer**
Y. Song, MD, A.D. Tieniber, MD, R.E. Roses, MD,
D.L. Fraker, MD, R.R. Kelz, MD, MBA, MSCE,
G.C. Karakousis, MD
- Complex cancer operations are performed increasingly at large teaching hospitals, but differences in outcomes when performed at the different types of hospitals have decreased. The importance of this finding is that centralization may have become less critical for some operations.

Presented at the Academic Surgical Congress 2019

- 812 **Accurate preoperative prediction of unplanned 30-day postoperative readmission using 8 predictor variables**
D.R. Gibula, MSCS, A.B. Singh, MD, M.R. Bronsert, PhD, MS,
W.G. Henderson, PhD, MPH, C. Battaglia, PhD, RN,
K.E. Hammermeister, MD, N.O. Glebova, MD, PhD, FACS,
R.A. Meguid, MD, MPH, FACS
- A parsimonious 8-variable preoperative risk assessment tool, developed from the American College of Surgeons National Surgical Quality Improvement Program data set, previously has been validated to accurately predict 30-day postoperative mortality and morbidity. It compares favorably to a 28-variable model in identifying surgical patient risk for unplanned, related readmissions. The importance of this report is the application of a parsimonious set of readily available variables to accurately predict individual surgical patient risk of unplanned readmission without the need for larger models requiring less readily available data.

HEALTHCARE

- 820 **Bariatric surgery among vulnerable populations: The effect of the Affordable Care Act's Medicaid expansion**
K.M. Gould, BS, A. Zeymo, MS, K.S. Chan, PhD,
T. DeLeire, PhD, N. Shara, PhD, T.R. Shope, MD, FACS,
W.B. Al-Refaie, MD, FACS

The Medicaid expansion under the Affordable Care Act reduced the gap in bariatric surgery rates by insurance status and income, but racial disparities persisted. The importance of this research is to continue to track these trends and focus on identifying other factors that can reduce disparity in bariatric surgery for minority patients.

TRAUMA/CRITICAL CARE

Presented at the Academic Surgical Congress 2019

- 829 **Rehospitalization and resource use after inpatient admission for extracorporeal life support in the United States**
Y. Sanaiha, MD, B. Kavianpour, BS, MPH, A. Mardock, BA,
H. Khoury, BS, P. Downey, MD, S. Rudasill, BA,
P. Benharash, MD

We performed a national analysis of readmissions after extracorporeal life support in adult patients. The importance of this report is that in addition to being the first national readmission analysis of extracorporeal life support, the study highlighted the frequency and associated costs of readmission in these patients and suggests that better pre-discharge planning may help to decrease this rate of readmission.

- 835 **Critical errors in infrequently performed trauma procedures after training**
C.F. Mackenzie, MD, S.A. Shackelford, MD, FACS,
S.A. Tisherman, MD, FACS, S. Yang, PhD, A. Puche, PhD,
E.A. Elster, MD, FACS, M.W. Bowyer, MD, FACS, and the
Retention and Assessment of Surgical Performance Group
of Investigators

Performance of trauma procedures was evaluated in residents after training compared with practicing surgeons and experts. The importance of this report is finding resident errors no different from experts but less than practicing surgeons.

INFECTION

- 844 **Protective effect of phosphatidylserine blockade in sepsis induced organ dysfunction**
G. Beattie, MD, C. Cohan, MD, E. Miraflor, MD,
W. Brigode, MD, G.P. Victorino, MD, FACS

Our study demonstrates that phosphatidylserine blockade mitigates sepsis induced gut dysfunction and coagulopathy. The importance of these findings is that phosphatidylserine signaling is a potential therapeutic target for prevention of organ injury in sepsis.

HERNIA

Presented at the Academic Surgical Congress 2019

- 849 **Enhanced recovery after surgery pathway for patients undergoing abdominal wall reconstruction**
J. Colvin, MD, M. Rosen, MD, A. Prabhu, MD,
S. Rosenblatt, MD, C. Petro, MD, S. Zolin, MD, D. Krpata, MD

We hypothesized that implementation of an enhanced recovery after surgery pathway for abdominal wall reconstruction would result in a decreased length of stay (LOS). Overall for all patients, our enhanced recovery after surgery study did not show a decrease in LOS, but with smaller hernia defects, lesser operative times, and better baseline quality of life scores, there was a shorter LOS.

PEDIATRICS

Presented at the Academic Surgical Congress 2019

- 854 **Predictors of in-hospital mortality in newborn conjoined twins**
B.A. Willobee, MD, M. Mulder, MD, E.A. Perez, MD,
A.R. Hogan, MD, A.-C. Brady, MD, J.E. Sola, MD,
C.M. Thorson, MD, MSPH

This nationwide study investigated risk factors for mortality in newborn conjoined twins and found that nearly two thirds do not survive the neonatal period. The importance of these findings support caring for these complex patients at hospitals equipped to care for this fragile population.

MINIMALLY INVASIVE SURGERY

Presented at the Academic Surgical Congress 2019

- 861 **Plasma lactate as a marker of metabolic health: Implications of elevated lactate for impairment of aerobic metabolism in the metabolic syndrome**
T.E. Jones, PhD, W.J. Pories, MD, J.A. Houmard, PhD,
C.J. Tanner, MS, D. Zheng, PhD, K. Zou, PhD, P.M. Coen, PhD,
B.H. Goodpaster, PhD, W.E. Kraus, MD, G. Lynis Dohm, PhD

Fasting plasma lactate was elevated in obese subjects with the metabolic syndrome and was reduced by exercise and bariatric surgery. The importance of this study suggests that elevated lactate may be caused by an impairment in aerobic metabolism.

Presented at the Academic Surgical Congress 2019

- 867 **Hospital factors strongly influence robotic use in general surgery**
C.L. Stewart, MD, S. Dumitra, MD, C. Nota, MD,
P.H.G. Ituarte, PhD, L.G. Melstrom, MD, MSc, Y. Woo, MD,
G. Singh, MD, Y. Fong, MD, H. Nathan, MD, PhD,
S.G. Warner, MD

We hypothesized that general surgeons are more likely to use a robotic surgical platform at hospitals where more urologic and gynecologic robotic operations are performed. This study is potentially important because it suggests that hospital-related factors are important for choice of usage of minimally invasive platforms

ESOPHAGUS

Presented at the Academic Surgical Congress 2019

- 873 **The influence of gastroesophageal reflux symptoms on patient satisfaction after sleeve gastrectomy**
I.A. Van Wieren, J.R. Thumma, MPH, N.R. Obeid, MD,
O.A. Varban, MD, J.B. Dimick, MD, MPH

We found that gastroesophageal reflux disease symptoms are a primary driver of patient satisfaction with sleeve gastrectomy. The importance of this finding is that it has implications for counseling patients on procedure choice when considering bariatric surgery.

Presented at the Academic Surgical Congress 2019

- 879 **Mesh reinforcement of paraesophageal hernia repair: Trends and outcomes from a national database**
K.A. Schlosser, MD, S.R. Maloney, MD, T. Prasad, MA,
V.A. Augenstein, MD, B.T. Heniford, MD, P.D. Colavita, MD

The American College of Surgeons National Surgical Quality Improvement Program was queried for patients who underwent laparoscopic and open paraesophageal hiatus hernia repairs with or without mesh (2010–2017). The importance of this study is that placement of mesh during an open or laparoscopic hiatus hernia repair is not associated with adverse outcomes, and the use of mesh is decreasing in patients undergoing a laparoscopic hiatus hernia repair with no apparent adverse impact on short-term patient outcomes.

- 886 **Long-term (15-year) objective evaluation of 150 patients after laparoscopic Nissen fundoplication**
A. Csendes, MD, O. Orellana, MD, N. Cuneo, MD,
G. Martínez, MD, M. Figueroa, MD

We performed preoperative and late (mean 15 years, range 12–24 years) clinical, endoscopic, histologic, and functional evaluations in 150 patients after laparoscopic Nissen fundoplication. This prospective study provides the longest objective evaluation of laparoscopic Nissen fundoplication, presenting symptom control in 80% of the patients, corroborated by the analysis of these objective measurements.

ENDOCRINE

Presented at the Academic Surgical Congress 2019

- 895 **Extent of surgery for low-risk thyroid cancer in the elderly: Equipose in survival but not in short-term outcomes**
A. Zambeli-Ljepović, BS, F. Wang, MS, M.A. Dinan, PhD,
T. Hyslop, PhD, M.T. Stang, MD, S.A. Roman, MD,
J.A. Sosa, MD, MA, R.P. Scheri, MD

More extensive surgery for low risk thyroid cancer in older adults may not improve survival; we show that it increases readmissions. The importance of this finding is that, often, lobectomy vs. total thyroidectomy may be both safer and less costly.

- 901 **Retrospective application of the pathologic tumor-node-metastasis classification system for pheochromocytoma and abdominal paraganglioma in a well characterized cohort with long-term follow-up**
A. Stenman, MD, PhD, J. Zedenius, MD, PhD,
C.C. Juhlin, MD, PhD

We tested how well the new 8th edition of the tumor-node-metastasis system for pheochromocytoma and abdominal paraganglioma could predict clinical outcomes for the patients. The importance of this report is that the tumor-node-metastasis system/American Joint Committee on Cancer stage could identify the patients at risk for a worse clinical outcome.

LIVER

Presented at the Academic Surgical Congress 2019

- 907 **The role of surgical shunts in the treatment of pediatric portal hypertension**
A.R. Cortez, MD, A.-F. Kassam, MD, T.M. Jenkins, PhD,
C.J. Nathan, J.D. Nathan, MD, M.H. Alonso, MD,
F.C. Ryckman, MD, G.M. Tiao, MD, A.J. Bondoc, MD

We report our experience with portal shunts for the treatment of pediatric portal hypertension. The importance of this report demonstrates that despite improved medical and nonoperative management, surgical shunts remain important to treating pediatric portal hypertension.

SMALL INTESTINE

- 914 **Protective effect of adipose tissue–derived mesenchymal stromal cells in an experimental model of high-risk colonic anastomosis**
V. Alvarenga Jr., MD, PhD, P.T.d. Silva, N.D. Bonfá, B. Pêgo,
H. Nanini, MSc, C. Bernardazzi, PhD, K. Madi, MD, PhD,
W. Baetas da Cruz, PhD, M.T. Castelo-Branco, PhD,
H.S.P. de Souza, MD, PhD, A. Schanaider, MD, PhD

The aim of this study was to investigate the effects of locally administered adipose tissue–derived mesenchymal stromal cells (AT-MSCs) in a model of high-risk colonic anastomosis in rats. This study is important because of the improvements in outcomes with AT-MSCs therapy that reflect the immunomodulatory activity and healing effect of these cells, even after just topical administration.

BARIATRICS

Presented at the Academic Surgical Congress 2019

- 926 **Six-month readmissions after bariatric surgery: Results of a nationwide analysis**
A.J. Rios-Diaz, MD, D. Metcalfe, LLB, MBChB,
C.L. Devin, MD, A. Berger, MD, F. Palazzo, MD

We characterized the national burden of 180-day readmissions after bariatric surgery (10.8%) using the Nationwide Readmission Database. Morbidity continues beyond the traditional 30-day benchmark, many of these patients require a subsequent intervention, and many are readmitted to different hospitals.

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BREAST

- 934 **Vacuum-assisted minimally invasive surgery—An innovative method for the operative treatment of gynecomastia**
Y. Yao, MD, Y. Yang, MD, J. Liu, MD, Y. Wang, MD, Y. Zhao, MD, PhD
This submission describes our experience on 22 patients with vacuum-assisted, minimally invasive mastectomy for gynecomastia. This innovative technique is advantageous, because it is safe, effective, and leaves no scar nor abnormality of contour on the anterior chest wall.

TRANSPLANTATION

Presented at the Academic Surgical Congress 2019

- 940 **Donation approval among obese living kidney donor candidates: The impact of metabolic syndrome**
M.N. Mustian, MD, MSPH, V. Kumar, MD, M. Hanaway, MD, P.A. MacLennan, PhD, B.A. Shelton, MPH, R.D. Reed, MPH, DrPH, T. Correya, R. Grant, BS, MS, A. Carter, BS, G. Baker, J. Patterson, M. Peoples, BS, S. Holden, B.J. Orandi, MD, PhD, J.E. Locke, MD, MPH, FACS, FAST
A screening tool was created capable of predicting donation approval among obese living kidney donors. The importance of this study includes the opportunity for future implementation of our tool, which allows for a more cost-effective donor approval process.

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Walter J. Pories, MD, Greenville, NC

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