

CO-ORGANIZED EVENT

13th International Conference on Clinical Gastroenterology & Hepatology & 2nd International Conference on Digestive Diseases

December 07-08, 2017 Madrid, Spain



Meredith Kenneth

Florida State University College of Medicine, USA

Minimally Invasive Approaches to Gastrointestinal Surgery

Background: Traditionally, the majority of gastrointestinal surgery particularly for malignancies are performed via open approaches. Longer length of hospitalizations, increased wound complications, and prolonged recovery are associated with these techniques. Unfortunately, the level of complexity, increased length of operation, and prolonged learning curve of the operating surgeon precludes wide spread adoption of minimally invasive techniques to gastrointestinal surgery. We sought to examine the impact of minimally invasive techniques including robotics on GI surgery.

Methods: Minimally invasive and robotic techniques are described and compared to conventional open techniques based upon current available literature. Utilizing a prospectively maintained esophageal and pancreatic database we identified patients that underwent robotic esophagectomy, pancreatic resection, colon resection and liver resection. Patient characteristics and survival were compared with Mann-Whitney U, Pearson's Chi-square, and the Kaplan-Meier method. Multivariable analysis (MVA) was developed to identify predictors of survival.

Results: There were 118 patients who underwent robotic pancreatic surgery; 42 distal pancreatectomies, 65 whipples, 4 total pancreatectomies, 6 pancreatic enucleations, and 1 robotic cyst gastrotomy. Demographics were median age of 70 (24-94), majority were males, 70 (59.3%), and the median BMI was 27.5 (16.8-40.2). 30 day mortality was 1 and 90 day mortality was 0. Major complications (Clavien-Dindo Grade 3-5) were seen in 21 cases (17.8%). The incidence of major complications significantly decreased between case 1 (20%) to case 60 (5.2%) and then steadily increased and stabilized between 5.2% and 7% from case 16 to 118. Similarly, operative time and overall complications decreased as case volume increased. We identified 203 patients (166 (81.8%) male: 37 (18.2%)female) with a median age of 67.2 (30-90) years who underwent robotic-assisted esophagogastrectomy for malignant esophageal disease. One-hundred sixty six were adenocarcinoma, 26 were squamous cell carcinoma and 11 were other. R0 resections was performed in 202 (99.5%) of patients. The median lymph node harvest was 18 (6-63). Neoadjuvant chemoradiation was administered to 157 (77.4 %) patients. A significant reduction in operative times ($p < 0.005$) following completion of 20 procedures was identified (514 ± 106 min vs. 415 ± 91 min compared to subsequent 80 cases and further reduced with the subsequent 100 cases 397 ± 71.9 min) $p < 0.001$. Complications decreased after the initial learning curve of 29 cases, $p = 0.04$.

Conclusions: Minimally Invasive and robotic techniques offer several advantages over conventional open approaches to gastrointestinal surgery. However, longer learning curves mandate a strict regimented program with appropriate mentorship and proctorship. Once learning curve has been surpassed, length of operation and post-operative morbidity will be substantially decreased.

Biography

Meredith is a Professor of Surgery at Florida State University College of Medicine and serves as Medical Director of Gastrointestinal Oncology at the Sarasota Memorial Institute for Cancer Care. He is a Surgical Oncologist with a focus on foregut malignancies. His clinical interests include minimally invasive approaches to resection of gastrointestinal malignancies including robotics. He has lectured and taught surgeons across the world about his robotic approaches and has pioneered robotic approaches to esophageal and pancreatic resections. He has published extensively and given over 200 presentations at the local, regional, national and international meetings.

Dr.Kenneth-Meredith@smh.com