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Trans-anal strictureplasty: A novel approach to a relatively common problem

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mesorectal excision (taTME), as first described at Florida Hospital, was developed for difficult mid and low rectal tumors. The taTME surgical technique and steps are demanding and require a relatively long learning curve. A study at our hospital demonstrated that 36-51 cases were needed to proficiently obtain a pathologically adequate TME specimen. Additionally, there exists the potential of TaTME-specific complications such as urethral injury, nerve damage, pelvic side-wall injury and sphincter damage. Given the technical challenges and nuances in avoiding associated complications the need for training in this technique became paramount. In 2014, the first taTME course at Florida Hospital was implemented as a training curriculum consisting of didactic lectures, online modules, live surgery and hands-on cadaver-based training together with on-site proctoring to help surgeons safely implement taTME and to shorten the learning curve. The goal of our study was to assess the 5-year follow-up data of surgeons who participated in our taTME course.

Methods/Interventions: To date, 258 surgeons had taken the taTME course at Florida Hospital since its inception in 2014. An online survey was conducted where participants that have taken the taTME course at Florida Hospital. Participants were asked about their pre-course and post-course experience with the taTME technique. Our primary end point was to determine what is the average adoption rate of taTME. Our secondary endpoints include participants' perceived confidence level with the surgery, related complications, limitations of adopting the TaTME approach, and population demographics pertaining to rectal cancer in their area.

Results/Outcome(s): There are 68 surgeons who have participated in the survey thus far, of which 40 (60.6%) came from academic hospitals and 26 (39.4%) from community hospitals. The median numbers of rectal cancer cases seen by the surgeons was 3 (IQR: 3-4). The median numbers of TME and TEM/TEO/TAMIS performed by the surgeons were 3 (IQR: 3-4) and 2 (IQR: 1-3) respectively. Forty-three (63.2%, 95% CI: 50.9%-74.0%) of the surgeons stated that they increased TME performance after the course. The average confidence index of TME performance increased from 1.06 (SD: 0.90) to 2.42 (SD: 0.82) (pairwise t-test, $p < 0.001$). The TME adoption rate increased from 39.7% to 77.9% (McNemar test, $p < 0.001$).

Conclusions/Discussion: Our current 5-year follow-up data on surgeons who have participated in the taTME course and survey demonstrates that adoption rates significantly increased as a result of participation in the course. In addition, participants felt that inadequate technique was the greatest limiting factor in adopting the technique, which was circumvented by taking the course. A majority of participants also noted that a refresher course was not needed. The taTME course clearly demonstrated increase in confidence in performing the technique and, perhaps, should be offered to more colorectal surgeons to facilitate adoption of the technique.

TRANS-ANAL STRICTUREPLASY: A NOVEL APPROACH TO A RELATIVELY COMMON PROBLEM.

P167

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Purpose/Background: Despite the advances in the surgical techniques and technology in colorectal surgery, the development of colorectal anastomotic stricture following left sided colon resection is a common problem. In some case series the incidence is estimated to be as high as 30%, some of the known risk factors for developing a stricture include anastomotic leak and ischemia. Treatment options range from frequent dilation using fingers and dilator if the stricture is low or frequent endoscopic balloon dilations, unfortunately multiple sessions may required to achieve adequate result, here we presents a case report and describe a novel approach for this common problem.

Methods/Interventions: Postoperative development of colorectal anastomotic stricture is a common complication with a range of 0-30%. Colonic stricture is a bowel obstruction of the enteric system characterized by the inability to pass a 12-mm proctoscope or a larger 19-mm rigid sigmoidoscope through it. Procedures like colostomy, colonic resection, colorectal endoscopic submucosal dissection and radiation enteritis could lead to the development of these strictures. A stricture may result from multiple risk factors like inflammation, tissue ischemia, or radiation of the colonic tissue.⁶ Risk is noted to be higher in stapled versus handsewn colorectal anastomosis. The rate of developing stricture in stapled colorectal anastomosis is about 8% compared to 2% when it is a handsewn anastomosis. Presentation of strictures depends on location and severity. The most common presentation of a colonic stricture is altered bowel habit that could be associated with localized pain to the area of obstruction. If the stricture is complete, there is will be no passage of stool or flatus risking bowel perforation if no intervention is performed in a timely manner.

Results/Outcome(s): Management of strictures depends on the patient condition during the time of his or her presentation. when surgical intervention is contemplated the etiology and location of the stricture should be considered. If the original resection procedure was done for a malignant process, the risk of tumor recurrence should be investigated and tissue biopsy is recommended prior to any intervention. If the resection was performed for benign disease and the location of the stricture is distal defined as narrowing within 10 Centimeters of the anal verge, the stricture can be effectively treated with frequent dilatation using fingers or dilators of different sizes. However, if the stricture is located higher up, endoscopic balloon dilatation can a viable option with very high success rate. However Endoscopic dilatation requires the ability to pass a guide

wire through the narrowed segment of the colon under fluoroscopic guidance, Very minimum morbidity are associated with this procedure. Complications of endoscopic dilatation based on rate of occurrence include (restenosis, perforation and abscess formation). Other methods can be used if dilatation is unsuccessful include a metallic stent that can be deployed across the area of stricture to keep the colon open. Conventional surgical approach whether laparoscopic or open offer long term cure, surgical options include complete resection and revision of the anastomosis or strictureplasty, higher morbidity and mortality are associated with anytype of transabdominal surgical approach and the risk of stoma should not be underestimated especially in unprepared bowel.

Conclusions/Discussion: Another option is a surgical resection of the stricture (strictureplasty) via transanal approach as described above. We believe our approach can be safe and as effective as the open or laparoscopic transabdominal surgical approach provided we are dealing with favorable anatomy and stricture within our stapler reach.

INCIDENCE AND PROGNOSIS OF PULMONARY METASTASIS IN COLORECTAL CANCER STRATIFIED BY PRIMARY TUMOR LOCATION AT INITIAL DIAGNOSIS: A SEER-BASED STUDY.

P168

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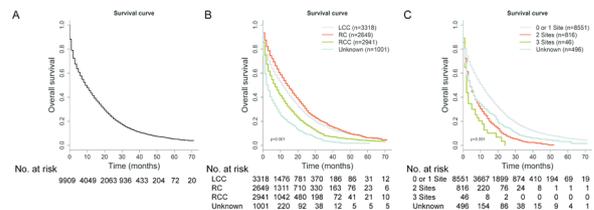
Purpose/Background: To examine the effect of primary tumor location on the incidence and the prognosis of colorectal cancer (CRC) patients with pulmonary metastasis at initial diagnosis.

Methods/Interventions: From Surveillance, Epidemiology, and End Results (SEER) database, 9 920 out of 192 969 CRC patients were identified with pulmonary metastasis at diagnosis between 2010 and 2015. Patients were classified into three subsets according to primary tumor location. The incidence of pulmonary metastasis and median survival were calculated. Multivariable logistic and Cox regression were performed to identify the risk factors of pulmonary metastasis and prognosis.

Results/Outcome(s): The overall incidence of pulmonary metastasis was 5.14% (9 920/192 969) in the entire CRC cohort and 25.66% (9 920/38 660) in metastatic CRC (mCRC) patients. The median survival of CRC patients with pulmonary metastasis at initial diagnosis was 10 months. Stratification of the data by different primary tumor location revealed that rectal cancer patients exhibited the highest incidence of pulmonary metastasis (6.42%, 2 650/41 251, in all rectal cancer patients; 36.55%, 2650/7250, in metastatic rectal cancer patients), while they had the longest median survival (15 months). Right-sided colon cancer patients had the lowest incidence of pulmonary metastasis (3.68%, 2 944/79 911, in all right-sided

colon cancer patients; 20.38%, 2 944/14 445, in metastatic right-sided colon cancer patients), while exhibited the shortest median survival (8 months). The risk factors for both the incidence and prognosis were identified to be 61 to 80 years old, over 80, black, 2 or 3 extrapulmonary metastatic sites, and CEA-positive.

Conclusions/Discussion: We highlighted the impact of primary tumor location on the incidence of pulmonary metastasis and prognosis of CRC patients. Our work revealed the incidence of pulmonary metastasis and median survival of CRC patients with primary tumors at different locations. For CRC patients with pulmonary metastasis, primary tumor location should be taken into consideration in clinical practice and personalized treatment.



A. Overall survival of CRC patients with lung metastasis.

B. Survival of CRC patients with lung metastasis stratified by primary tumor location. Abbreviations: LCC, left-sided colon cancer; RCC, right-sided colon cancer; RC, rectal cancer.

C. Survival of CRC patients with lung metastasis stratified by the extent of extrapulmonary metastatic disease. Extent of extrapulmonary metastatic disease is classified by the number of metastatic sites (brain, bone, or liver).

WHO IS AT GREATEST RISK FOR INCISIONAL HERNIA AFTER LOOP ILEOSTOMY CLOSURE?

P169

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Purpose/Background: There is wide variation amongst the literature in the reported rate of hernia after ileostomy closure. Given the significant heterogeneity in existing data with regards to risk factors for hernia, our aim was to determine the rate of hernia occurrence after closure of a loop ileostomy and attempt to identify any perioperative risk factors that may be associated with hernia development.

Methods/Interventions: Using billing data with Current Procedural Terminology codes we identified a retrospective cohort that included all patients who underwent loop ileostomy formation and closure over a 3-year time frame at a single institution among a group of 7 colorectal surgeons. The primary outcome was identification of hernia on either physical exam or via abdominal imaging. Each case was individually queried to identify patient co-morbidities, presence of previous hernia surgery, follow-up time and presence of the primary outcome. A stepwise logistic regression analysis was used to determine predictors of ileostomy site hernia.