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KIOSK 2

ACQUIRED MORGAGNI HERNIA AFTER CARDIAC SURGERY PRESENTING AS ACUTE STRANGULATION: SURGICAL APPROACH AND SUCCESSFUL REPAIR IN AN ADULT PATIENT

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Background: Morgagni hernia is an uncommon type of diaphragmatic hernia, typically due to a congenital defect. However, acquired Morgagni hernia in adults has been described in the literature as an extremely rare complication after cardiac surgery. Management can be complicated when patients present with severe symptoms, such as severe respiratory distress or bowel strangulation. We describe an interesting case of an acquired Morgagni hernia presenting as respiratory distress and bowel ischemia in an adult that was successfully repaired primarily with a robotic converted to open approach.

Summary: The patient is a 76-year-old man with a history of COPD, coronary artery disease, coronary artery bypass graft x3 3 years prior to presentation, and recently diagnosed atrial fibrillation (on Amiodarone and Xarelto). He initially presented to an outside hospital with a 2–3-week history of nausea, vomiting, weakness, and new onset shortness of breath and abdominal pain. Workup included CT abdomen, showing a large diaphragmatic hernia with involved small bowel, colon, and stomach concerning for incarceration (figure 1). Due to worsening respiratory distress requiring BiPAP and hemodynamic instability requiring pressors, he was transferred to a tertiary center for further evaluation and treatment. Antibiotics were started and he was admitted to the ICU. It was determined that he would require emergent surgical intervention and he proceeded to the operating room after a discussion with the family.

Case Description: Entrance into the abdomen was achieved using a 5mm optical trocar in the supraumbilical region. There was an obvious, large diaphragmatic defect identified below the sternum containing the transverse colon, stomach, and a large amount of small intestine. The remaining robotic ports were placed and the DaVinci robot was docked. The hernia contents were then carefully reduced, with special attention paid to the transverse colon as it was incarcerated and difficult to extract. At this time, there were no obvious signs of ischemia. The hernia sac was then reduced. The falciform ligament was divided in the epigastric region and the preperitoneal dissection was carried toward the hernia defect. The hernia sac was reduced easily from the diaphragmatic defect and was eventually excised in its entirety as it was extremely redundant and large.

The bowel was then examined with firefly technology, which showed poor perfusion to the ascending colon, hepatic flexure, and transverse colon. At this point, the patient began to have worsening hemodynamic instability. The decision was made to convert to open and proceed with a right colectomy. The robot was undocked, pneumoperitoneum was released, and a midline incision was made between the xiphoid process and the umbilicus. The right and transverse colon were mobilized using an energy device. The terminal ileum and the transverse colon were divided using GIA stapler loads. The diaphragm was re-evaluated and appeared mobile enough to allow for closure of the defect. The edge of the diaphragm was sutured to the anterior abdominal wall in two layers using a #1 Stratafix suture. A drain was placed across the defect into the pleural space. At the conclusion of the repair, the entire defect was closed. Due to the patient's continued pressor requirements, the decision was made to proceed with end ileostomy rather than attempt anastomosis. The abdominal wall was closed, and the ileostomy was matured in the right abdominal wall.

Post-operatively, the patient remained in the ICU. He was extubated on post-op day 2, tolerated PO intake on post-op day 3, had ostomy output by post-op day 4, and was weaned off pressors by post-op day 5. His drains were removed with no adverse events on post-op day 6. He was discharged home on post-op day 9. He was seen in clinic 2 weeks after discharge and was doing well. Ultimately, he underwent reversal of his ileostomy 4 months after his initial operation and continues to do well.

Discussion: Morgagni hernias are rare hernias with a prevalence of 2-3%. Acquired Morgagni hernias are even more rare and typically occur due to thoracoabdominal trauma, pregnancy, obesity, or other mechanisms of increased intra-abdominal pressure such as chronic cough or constipation. In the pediatric population, acquired Morgagni hernias have been observed after open cardiac surgery, likely due to median sternotomy causing direct communication between the thoracic and abdominal cavities. The placement of pericardial drains has also been a proposed cause as they can lead to injury to the anterior diaphragm. Diagnosis is typically made through radiologic evaluation, such as CT scan. Repair is ideally performed in the elective setting to prevent incarceration of hernia contents. However, some patients may present with acute respiratory distress, intestinal obstruction, and bowel ischemia or perforation requiring urgent surgical intervention. Operative repair of congenital Morgagni hernias is most commonly done through an abdominal approach as it allows for examination of the entire abdominal contents. Thoracoscopic approaches have been used in morbidly obese patients due to easier access to the hernia itself. Excision of the hernia sac has generally been the standard of care as it is thought to decrease the risk of hernia recurrence. However, there have been reports of incomplete excision due to dense adhesions between the hernia sac and thoracic structures. The hernia defect can be repaired primarily. However, mesh has been used to reinforce the closure or as a bridge to achieve tension-free repair.

Conclusion: There has been at least one reported case of an acquired Morgagni hernia in an adult after cardiac surgery. However, this case study differs from previous examples as our patient presented with severe symptoms and underwent emergent surgical intervention. In our experience, the robotic approach allowed for excellent visualization for hernia reduction and hernia sac excision. Also, due to the clean-contaminated nature of the case and the patient's overall condition, the use of mesh was avoided. Overall, we show that acquired Morgagni hernia can be safely managed even in patients with advanced symptoms.

Lessons Learned: Current literature for the treatment of acquired Morgagni-type diaphragmatic hernia is limited due to the rarity of this complication. We present a case of this complication in a patient presenting with severe respiratory distress and evidence of bowel compromise. A high index of suspicion after cardiac surgery is necessary for patients presenting with early symptoms—such as nausea, vomiting, or shortness of breath—to potentially prevent strangulation of hernia contents. There is no standardized approach to repair, but evidence shows robotic or open repair is possible.

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PROLAPSED COLON CANCER TREATED WITH ALTEMEIER PROCEDURE

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Background: Rectal Prolapsed is a pelvic floor disorder that typically presents in older adults that has a broad range of local symptoms, bowel dysfunction and diminished quality of life. The etiology is multifactorial and there are several risk factors including older age, female sex, multiparity, chronic constipation, dementia, prior stroke, vaginal delivery, prior pelvic surgery, and pelvic floor dysfunction and anatomic defects. The mainstay of treatment remains surgical repair to reduce the mobility of the rectum and sigmoid colon with removal of the prolapsing rectum and sigmoid colon to give support to the pelvic floor. The Altemeier procedure is a rectosigmoidectomy, which involves full thickness resection of the rectum extending to the sigmoid colon with a coloanal anastomosis. In elderly adults with multiple comorbidities and frailty, this operation is favored due to lower operative morbidity and faster recovery. Although not routinely seen in practice, rectal prolapse can present with a rectal mass with concerns for prolapsing colon cancer, which poses both a diagnostic and treatment challenge. Our colorectal practice has encountered three patient scenarios involving prolapsed colon cancer that has led to treatment in a unique fashion. Our case series examined Altemeier procedure as a modality of surgical resection for prolapsing colon cancer. There is a lack of literature that has employed this technique as an oncological procedure for prolapsed colon cancer. Hence, this case series heralds a new perspective on an existing and established technique to treat this problem to improve surgical outcomes and contribute to educational value of the operative technique.

Summary: We queried the Colon and Rectal Associates patient care records for patients diagnosed with prolapsed colon cancer who underwent Altemeier Procedure, rectosigmoidectomy. We identified 3 patients who met inclusion criteria for our case series. We reviewed their clinical presentation, treatment regimen, imaging, pathology report, inpatient notes and post operative clinic follow up documentation. Clinical chart review of patient outcomes indicated that the Altemeier procedure serves as an effective operation for prolapsing colon cancer in elderly, frail and debilitated patients.

Case Description: Patient 1: 86 year old female with prolapsed 5cm rectal mass concerning for colon cancer. Altemeier procedure performed. Pathology: invasive adenocarcinoma grade 2, negative margins, no lymph node involvement. Stage T3N0. Patient 2: 77 year old female who presented with rectal prolapse. Altemeier procedure performed, noted to have a lead point. Pathology: invasive adenocarcinoma grade 1, negative margins, no lymph node involvement. Stage T2N0. Patient 3: 76 year old female who presented with rectal prolapse with lead point mass. Altemeier procedure performed. Pathology: Tubulovillous adenoma. Stage Tis.

Discussion: Through our case series, we examined three separate cases of elderly females diagnosed with prolapsed colon cancer who presented with complete rectal prolapse. Patient 2 and patient 3 had tumors that caused rectosigmoid intussusception. All three patients had significant medical comorbidities and underwent Altemeier procedure. The patients tolerated the procedure well and did not have any post-operative complications. On initial clinic follow up, there was no evidence of bleeding, pain, anastomotic dehiscence or fecal incontinence. Follow up at 3-year intervals noted that the patients were without any evidence of disease. Patients did not have fecal incontinence, chronic constipation or

recurrent prolapse. The relationship between colorectal cancer and rectal prolapse has not been well established; however, our case series suggests that this approach to treatment has favorable patient outcomes.

Conclusion: Our case series placed an emphasis on an existing and established surgical technique, Altemier procedure on a unique clinical scenario involving prolapsed colon cancer. Typically, the etiology of rectal prolapse is multifactorial and predominantly affects elderly patients with multiple medical comorbidities. Given their poor functional status, these patients have a higher morbidity and mortality with an abdominal operation. Hence, the Altemier procedure serves as a lower risk treatment for elderly patients who present with this challenging clinical scenario. Although, the recurrence rates for the Altemier procedure are higher, the procedure is associated with lower morbidity and mortality. Therefore perineal rectosigmoidectomy combines a safe approach with lower complication rates with associated improvement in quality of life.

Lessons Learned: The Altemier procedure, rectosigmoidectomy, serves as an effective operation for prolapsing colon cancer in elderly, frail and debilitated patients. The case series highlights a new perspective on an existing and established operation to treat prolapsed colon cancer.



OUTCOMES OF METASTASECTOMY FOR METASTATIC COLORECTAL CANCERS

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Introduction: Incidence of colorectal cancer (CRC) has increased significantly over the last decade. Per SEER database, in 2022 thus far, there have been more than 150,000 reported cases that comprise 8% of all new cancer cases. The 5-year survival rate is 65.1%. In the United States, it ranks as the 4th most commonly diagnosed cancer and also the 2nd leading cause of cancer related death. Colorectal cancer is more common in men than in women. In regard to race, it is more prevalent in African American race. Median age at diagnosis is 66 years; although, there have been trends that indicate that there is an increasing number of patients being diagnosed with early onset CRC. Approximately, 20-30% of all patients with CRC present with metastatic disease, particularly to the liver and lung. The role of surgery and metastasectomy is controversial in the treatment of stage IV colon cancer. The aim of our study was to examine the effects of surgical resection of metastatic colorectal cancers.

Methods: After obtaining IRB approval, we queried the SEER database for state IV colorectal cancer patients who underwent metastasectomy from 2007-2018. We analyzed the demographic and socioeconomic trends in the patients who were diagnosed with stage IV disease. Clinicopathologic factors were examined and factors associated with receipt of treatment were correlated. Patient outcomes from metastasectomy were analyzed. Overall survival (OS) using Kaplan Meier analysis and log-rank test were performed.

Results: Overall, 20-30% percent of patients were diagnosed with stage IV disease. A significant portion of the patients had only liver metastases whereas the minority had lung metastasis and extra-hepatic disease. There were noted socioeconomic and demographic disparities identified in patients who were diagnosed with advanced pathologic stage, stage IV colorectal cancer compared to earlier stages. The overall survival (OS) in metastasectomy group was improved compared to patients who did not receive surgical intervention.

Conclusion: Significant socioeconomic and demographic disparities exist regarding the presentation of stage IV colorectal cancer. A multitude of clinicopathologic and socioeconomic factors exist in regard to receipt of care. Although metastasectomy for stage IV colorectal cancer is controversial, surgical resection of isolated hepatic and pulmonary metastases has improved long term overall survival.

Kiosk #2 | ePoster#24

Clinical Science | Education

INPATIENT ADMISSIONS VERSUS GENERAL SURGERY RESIDENT CASE NUMBERS OVER TIME

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Introduction: Background & Description

The past two decades have seen a trend in increasing numbers of general surgery residents pursuing fellowship training upon completion of residency. It has been postulated that the implementation of duty hours by the ACGME resulted in a diminished operative experience and decreased confidence level in graduating residents, driving the trend toward additional training in fellowships. However, the past two decades have also seen shifts in management of many surgical diseases. Many medical conditions that have historically been treated with surgery are now managed medically or with percutaneous interventions, possibly resulting in a lower number of operations performed per inpatient admission at a given hospital. To our knowledge, no study has reviewed the total number of operative cases per hospital admission over a significant period of time. If a trend is shown, this may demonstrate implications for future surgical resident training.

Objective

Our hypothesis is that the number of operative cases done per hospital admission has decreased over the previous two decades. The primary objective of this study is to establish a trend between the number operative cases and number of inpatient admissions at our institution.

Methods: This is a single site, retrospective cohort study including data from January 1998 to December 2020. Inpatient admission data from both Monroe and Shreveport campuses of Louisiana State University Health Sciences Center (LSUHSC) was collected via data request from the Louisiana Department of Health. Resident case log data was collected from the records of the LSUHS Department of Surgery. Regression analysis was then used to compare trends in operative case numbers with trends in hospital admissions over time.

Results: Regression analysis showed that the operative case volume of surgery residency graduates has remained constant over the time period examined. However, inpatient admissions to our facility campuses steadily increased throughout the time period (R^2 ranges from 0.34-0.47). When plotted against one another, we found a decrease over time in the number of operative cases performed per hospital admit (R^2 ranges 0.16-0.29).

Conclusion: Although further analysis is required, current review of study data indicates that general surgery resident case log volume at our institution has remained stable while total number of inpatient admissions has steadily risen. With what appears to be an increased number of admissions needed to support a steady number of operative cases for surgery residents, new shifts towards hospitalist admission models may enable surgical residents to maintain needed operative case volume with decreasing operations per admitted patient.

THYROID AND PARATHYROID SURGERY OUTCOMES IN DIABETIC PATIENTS: A NATIONWIDE STUDY

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Introduction: Diabetic patients often have several comorbidities and face higher risk of poor outcomes following major surgeries. While many thyroid and parathyroid surgeries are elective, ambulatory, and short-duration procedures, the physiologic stress of these surgeries may still adversely affect diabetic patients. We hypothesized that post-operative course of diabetic patients may be more complicated compared to non-diabetic patients after thyroid and parathyroid surgeries.

Methods: We evaluated 53,334 thyroid and 15,262 parathyroid surgery patients from 2010-2014, using Nationwide Readmission Database. Univariate and multivariate analyses were performed on diabetic vs. non-diabetic cohort for post-operative complication, length of stay (LOS), readmission rate, and hospital costs.

Results:

8,480 thyroid surgery patients (15.9%) and 2,945 parathyroid surgery patients (19.3%) were identified with diabetes mellitus as a comorbid condition. Diabetic patients showed higher risk of post-operative complications (OR: 1.16, 95%CI: 1.06-1.27, P=0.002) and 30-days readmission rate (OR: 1.27, 95%CI: 1.18-1.37, P<0.001). Diabetic patients also exhibited prolonged LOS (OR: 1.14, 95%CI: 1.02-1.27) and incurred higher overall hospital costs (OR: 1.11, 95%CI: 1.02-1.21, P=0.010) than non-diabetic cohort. Older age (>45 years), Charlson Comorbidity Index \geq 2, and presence of metabolic syndrome were independent predictors of higher rate of complications such as bleeding, infection, or end-organ dysfunction (p<0.05).

Conclusion: Diabetic patients face unique challenges even when undergoing elective thyroid or parathyroid surgeries. These low risk procedures are associated with higher risk of complications, prolonged LOS and higher costs, when performed for diabetic patients. Future studies of this population are warranted to ensure quality outcome and to reduce healthcare expenditures.

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Table 1. Statistics of thyroid and parathyroid surgery patients (Non-diabetic vs. Diabetic)

Characteristics	Levels	Thyroid surgery		P value	Parathyroid surgery		P value
		Non-diabetic	Diabetic		Non-diabetic	Diabetic	
Demographic data							
Age (year)	Mean ± SD	51.94 ± 15.20	60.39 ± 12.10	<0.001	57.50 ± 15.25	62.53 ± 11.83	<0.001
	>18-45	32,482 (34.6)	2,069 (11.62)	<0.001	6,020 (21.8)	547 (7.98)	<0.001
	>45-65	41,821 (44.6)	9,191 (51.60)		12,367 (44.7)	3,326 (48.53)	
	>65	19,442 (20.7)	6,551 (36.78)		9,266 (33.5)	2,981 (43.49)	
Gender	Male	18,060 (19.3)	4,323 (24.27)	<0.001	6,774 (24.5)	1,878 (27.40)	<0.001
	Female	75,686 (80.7)	13,488 (75.73)		20,880 (75.5)	4,976 (72.60)	
Comorbidities							
Charlson Comorbidity Index (CCI)	0	78,663 (83.91)	13,153 (73.85)	<0.001	20,852 (75.40)	4,203 (61.32)	<0.001
	1	13,076 (13.95)	3,804 (21.36)		3,663 (13.25)	1,255 (18.31)	
	≥2	2,006 (2.14)	854 (4.79)		3,139 (11.35)	1,396 (20.37)	
Number of chronic diseases	Mean ± SD #	2.93 ± 2.03	5.51 ± 2.34	<0.001	3.85 ± 2.32	6.52 ± 2.66	<0.001
	≤5	83,427 (88.99)	10,147 (56.97)	<0.001	21,668 (78.36)	2,743 (40.02)	<0.001
	>5	10,319 (11.01)	7,664 (43.03)		5,985 (21.64)	4,111 (59.98)	
BMI (≥25 Kg/m ²)	No	87,073 (92.88)	14,951 (83.94)	<0.001	25,794 (93.28)	5,867 (85.60)	<0.001
	Yes	6,673 (7.12)	2,860 (16.06)		1,859 (6.72)	987 (14.40)	
Metabolic syndrome	No	93,631 (99.88)	17,765 (99.74)	<0.001	27,634 (99.93)	6,836 (99.74)	<0.001
	Yes	114 (0.12)	46 (0.26)		19 (0.07)	18 (0.26)	
Primary diagnosis	Malignant	26,604 (30.99)	4,579 (28.07)	<0.001	---	---	
	Benign	51,029 (59.45)	10,523 (64.50)		---	---	
	Functional	8,202 (9.56)	1,212 (7.43)		3,843 (100)	636 (100)	
Postoperative outcomes							
Postoperative complications	None	82,366 (87.86)	15,005 (84.25)	<0.001	23,138 (83.67)	5,393 (78.68)	<0.001
	One or more	11,380 (12.14)	2,806 (15.75)		4,515 (16.33)	1,461 (21.32)	
30-days readmission	No	83,036 (95.75)	15,638 (94.42)	<0.001	24,083 (94.38)	5,818 (91.48)	<0.001
	Yes	3,688 (4.25)	925 (5.58)		1,433 (5.62)	542 (8.52)	
90-days readmission	No	65,313 (90.28)	12,151 (87.50)	<0.001	19,005 (89.64)	4,525 (85.15)	<0.001
	Yes	7,030 (9.72)	1,736 (12.50)		2,197 (10.36)	789 (14.85)	
Hospital service							
Length of stay (# days)	Mean ± SD	1.48 ± 2.00	1.70 ± 2.47	<0.001	1.66 ± 2.06	1.95 ± 2.16	<0.001
	≤ 2	85,227 (90.91)	15,564 (87.38)	<0.001	23,880 (86.35)	5,533 (80.73)	<0.001
	> 2	8,519 (9.09)	2,247 (12.62)		3,774 (13.65)	1,321 (19.27)	
Hospital costs, \$	Mean ± SD	7,937.78 ± 6,481.17	8,611.30 ± 9,004.04	<0.001	8,347.98 ± 5,808.20	8,881.87 ± 11,717.75	<0.001
	≤ \$10,125	71,654 (81.42)	13,159 (77.90)	<0.001	20,375 (76.87)	4,974 (75.18)	0.002
	> \$10,125	16,350 (18.58)	3,734 (22.10)		6,132 (23.13)	1,642 (24.82)	

The data is shown as number (percentage) or mean ± standard deviation (SD). All numbers are presented as weighted national estimates. Two-sided Chi-square, students t test (#) Mann-Whitney U tests were used. Statistical significance was set at P<0.05. BMI: body mass index. LOS, number of chronic diseases, and cost were classified based on ≤ and > 75th percentile.

Kiosk #2 | ePoster#26

Clinical Science | Endocrine

MEDICAL MANAGEMENT VERSUS PARATHYROIDECTOMY IN PATIENTS WITH MILD PRIMARY HYPERPARATHYROIDISM: A META-ANALYSIS

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Introduction: Primary hyperparathyroidism (pHPT) is a common endocrine disorder characterized by excess parathyroid hormone (PTH) production and hypercalcemia associated with increased musculoskeletal, renal, and cardiovascular risk. Mild pHPT is typically defined as asymptomatic patients with modest hypercalcemia, long-term consequences are less understood, and management recommendations are a matter of debate.

Methods: A systematic search of the literature was conducted using PubMed, Embase, and Web of Science up to June 2022. Our query found 954 unique published articles, which were independently screened and extracted by multiple authors. Studies reporting patients with pHPT with minimal symptoms and discussing relevant outcomes were considered.

Results: A total of 12 studies met inclusion criteria, allowing a cohort of 1,346 patients with a mean follow-up time of 41 ± 23.8 months. Of this, 632 patients and 714 patients underwent medical and surgical treatment, respectively. The average calcium and PTH levels after surgical treatment were 9.40 mg/dL and 43.36 pg/mL, and after medical treatment were 10.46 mg/dL and 103.96 pg/mL, respectively. When compared to patients that underwent parathyroidectomy, medically treated patients had a decline in overall body mass density (BMD) by 0.36 g/cm² (OR=0.50, 95%CI= -0.76, 0.00), a decline in lumbar BMD by 48 g/cm² (OR=0.42, 95%CI= -0.85, -0.10), and a decline in hip BMD by 0.61g/cm² (OR=0.33, 95%CI= -1.13, -0.09).

Conclusion: Patients undergoing medical treatment for mild pHPT maintain higher calcium and PTH levels. Additionally, patients managed medically had poorer bone mineral densities. Parathyroidectomy may be the treatment of choice for selecting patients considering superior biochemical and musculoskeletal outcomes.

Kiosk #2 | ePoster#27

Clinical Science | Endocrine

ELEVATING ADEQUACY: A META-ANALYSIS OF RAPID ONSITE EVALUATION OF THYROID NODULES

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Introduction: Fine-needle aspiration (FNA) is the standard form of pre-operative evaluation of thyroid nodule cytological status. Still, a significant number FNAs are classified as inadequate for interpretation, requiring a repeat FNA which is potentially avoidable, costly, and delays treatment. To address these concerns, rapid onsite evaluation (ROSE) of FNA specimens was introduced. Our study aims to determine the impact of ROSE on FNA adequacy.

Methods: PubMed, Embase, and Web of Science were searched for primary articles assessing the adequacy of ROSE in thyroid nodules. Two investigators independently screened and extracted the data.

Results: A total of 17 studies were included for a total of 24,661 thyroid nodes. 13,227 (53.6%) thyroid nodules were assessed utilizing ROSE and 11,434 (46.4%) did not. Pooled adequacy increased significantly from 76% without ROSE to 92% with ROSE ($p=0.001$). Use of ROSE increased the odds of adequate FNA by 22% (relative risk (RR)=1.22, 95%CI=1.12-1.32, $p<0.001$). In studies reported from hospitals with < 85% effective diagnostic adequacy without ROSE, the relative risk for diagnostic adequacy increased by 28% with ROSE (RR=1.28, 95%CI = 1.20-1.37, $p<0.01$). In studies reported from hospitals with an effective diagnostic rate >85% without ROSE, the diagnostic adequacy only increased by 5% (RR=1.05, 95%CI = 1.03-1.06, $p=0.69$).

Conclusion: The use of ROSE during first-time FNA of thyroid nodules can significantly improve adequacy, especially at institutions with high inadequacy rates. Implementation of ROSE can reduce repeat FNAs and its associated consequences. Future studies are warranted, especially cost-effective analyses, to better expand on the consequences in ROSE implementation.

Kiosk #2 | ePoster#28

Clinical Science | General Surgery

RISK FACTORS FOR POST-OPERATIVE INFECTIONS FOLLOWING APPENDECTOMY OF COMPLICATED APPENDICITIS: A NETWORK META-ANALYSIS

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Introduction: Complicated appendicitis has been associated with worse postoperative outcomes and greater use of healthcare resources. There is a paucity of information detailing these risk factors in the setting of laparoscopic vs. conventional surgical techniques for complicated appendicitis. This is the first network meta-analysis analyzing the risk factors for postoperative outcomes of complicated appendicitis.

Methods: This meta-analysis was performed according to the Preferred Reporting Items for Systematic reviews and Meta-analysis (PRISMA) guidelines. We conducted a comprehensive literature review of PubMed, Embase, and Cochrane for data published up to April 2022. Our search criteria included terms that included approaches to appendectomies and postoperative complications (abdominal infection, abscess, peritonitis, gangrene, gangrenous).

Results: In total, 35 studies fit our criteria. The total sample size was 5,326, and the average age was 26.4 years old. Perioperative hyperoxygenation (>80% oxygenation) was found to decrease the risk of infection by 76% (OR=0.24, 95%CI=0.07-0.75) and open surgery was found to increase the risk of infection by 63% (OR=1.63, 95%CI=1.03-2.58). Additionally, there was found to be a 32 times higher risk of hospital readmission (RR=32.08, p=0.27) with complicated appendicitis as compared to non-complicated appendicitis. Patients experiencing infectious sequelae following appendectomy for complicated appendicitis were also found to have a prolonged length of stay by a standard mean difference of 1.84 days, as well as a higher risk of mortality (RR=3.51, 95%CI=0.21-60.1).

Conclusion: Compared to traditional open surgery, laparoscopic surgery may be protective and preventative in post-appendectomy infections. More data is needed to determine if hyperoxygenation can decrease the risk of post-appendectomy infections.

STRIKING A WORK LIFE BALANCE: A SURVEY OF SURGEON SATISFACTION WITH JUGGLING CAREERS AND FAMILY

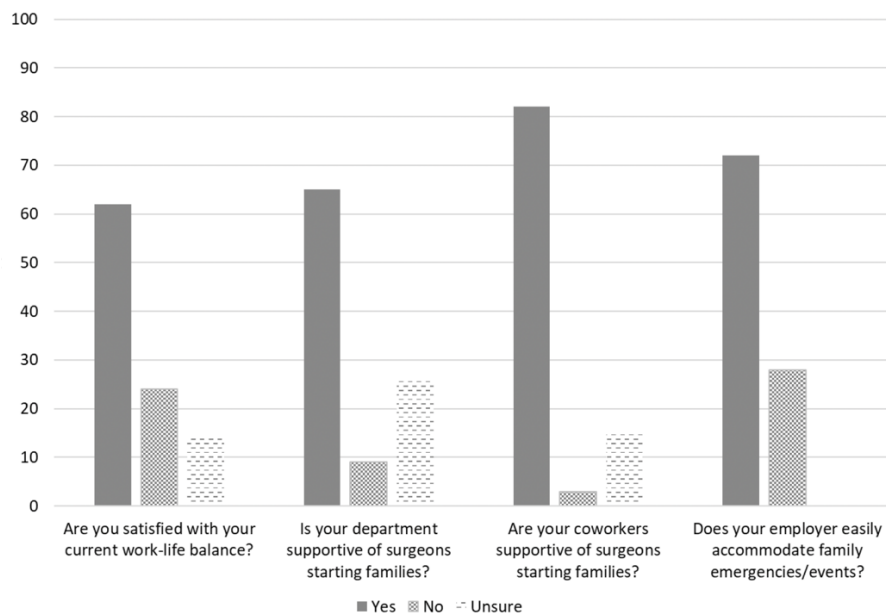
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Introduction: It can be difficult to juggle family responsibilities and professional development as a surgeon. This dilemma can deter medical students from pursuing surgical careers. Employer attitudes towards surgeons starting families and difficulties with work-life balance appear to be a major contributor and can lead to burnout. This study aimed to assess the challenges facing practicing surgeons when managing a career with family life.

Methods: A 70-question RedCap survey was distributed to practicing surgeons from different specialties through Department Heads, Division Chiefs, and the local chapter of the American College of Surgeons. The survey was validated prior to being distributed three times.

Results: A total of 92 surgeons completed the survey with 66% being male (n=61/92). About 84% (n=77/92) of participants were married and 63% (n=58/92) had a partner who worked less than 50 hrs/week. Most participants reported having children (74%, n=68/92) and 62% (n=57/92) had a family size congruent with the national average of 1-2 children per household. Surgeons felt supported by either their employers (65%, n=60/92) or their colleagues (82%, n=75/92) to start families. More than half of participants (62%, n=57/92) reported work-life balance satisfaction. Most participants (72%, n=66/92) agreed their employers easily made accommodations for surgeons to meet certain obligations such as family emergencies.

Conclusion: The surgical lifestyle can make balancing a career with family responsibilities difficult. Despite these challenges, most surgeons reported an average family size, satisfaction with work-life balance, and the ability to meet family expectations. Further studies are needed to determine areas of a surgeons' work-life that can be improved.



Kiosk #2 | ePoster#30

Basic Science | Patient Safety & Quality Improvement

DISCREPANCY IN POLICIES AND BEHAVIORS AROUND SURGICAL ATTIRE IN TEACHING HOSPITALS IN LOUISIANA: THE ILLUSION OF QUALITY CONTROL

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Introduction: Surgical attire is an integral component of surgical site infection control, assumed to reduce the transmission of pathogens from staff to patients. Despite this assumption, there are no data to support one attire policy over another. General Surgery Residents in Louisiana train in a number of teaching hospitals under six different health systems. We hypothesized that there would be wide variation in surgical attire policies across 16 hospitals reviewed.

Methods: Written policies for surgical attire from 16 teaching hospitals in Louisiana were reviewed. Residents rotating at each hospital were polled for their subjective perception of enforcement of policies. Results were compiled and differences were analyzed.

Results: 15/16 hospitals provide OR scrubs and stipulate that these scrubs should not leave the hospital. One hospital requires residents to provide their own scrubs of any color/scrub type. Polls of the residents revealed that policies were never (10/16), rarely (4/16), mostly (1/16), and always (1/16) enforced. Only one hospital has a scrub jacket policy, which is not enforced. 8/16 hospitals required cloth hats to be covered by a bouffant, which is only rarely enforced. 8/16 hospitals allowed cloth hats without coverage with another surgical cap.

Conclusion: There is significant variation in surgical attire policies and enforcement across Louisiana teaching hospitals. Since published data have shown that specific policies around scrubs, caps, and jackets in the operating room do not change the rate of surgical infection, our findings would support using other variables such as cost, waste reduction, and surgeon morale when creating or revising surgical attire policies.

Kiosk #2 | ePoster#31

Clinical Science | Quality Improvement

TULANE STAR (SENDING TEXTS, ADVANCING RESULTS): EVALUATION OF TEXT MESSAGING ON POST-OPERATIVE MINIMALLY INVASIVE SURGERY OUTCOMES

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Introduction: Text messaging is frequently employed in the outpatient setting to communicate with or send reminders to patients. However, there is little evaluation in the literature of the impact of text messages sent to inpatients. In this novel study, we evaluated the impact of text messaging in hospitalized patients, specifically patients who are post-op bariatric surgery.

Methods: Patients were randomized to either the control group, in which they received standard post-operative education alone or the Tulane Sending Texts, Advancing Results (STAR) intervention arm, in which participants received the same post-operative education along with text message reminders to drink water, use their incentive spirometers, and ambulate. The primary outcome was compliance with the protocol and secondary outcomes include length of stay, complications, and opioid requirements

Results: A total of 35 patients were enrolled in the study (17 control, 18 STAR). There was no difference in demographics between the groups. Clear liquid consumption was higher in the STAR group with an average of 27.7 +/- 3.5 cups compared to 18.2 +/- 8.9 in the control group ($p < 0.001$). Significant increases in incentive spirometry usage ($p < 0.01$), ambulation distance and frequency ($p < 0.02$), IV opioid usage ($p < 0.05$), and post op-op complications ($p < 0.05$) were observed in the STAR intervention group.

Conclusion: While patients are in the hospital, text messaging can improve compliance to post-operative protocols and may result in improved secondary outcomes. Perioperative text messaging can enhance patient education and communication.