

IMPLEMENTATION OF A VOLUNTARY REPORTING OF ERRORS & SAFETY ISSUES IMPROVES SITUATIONAL AWARENESS(SA) FOR RESIDENTS AND STAFF

ABSTRACT #59 REF: 11003413

Introduction: Situational awareness is at the core of high reliability organizations. Identification of errors, safety concerns, and near misses is critical for improving patient outcomes especially in multi-center institutions. Our objective was to implement a department-wide voluntary self-reporting anonymous program to improve SA, enhance leadership skills and to identify possible interventions and education opportunities.

Methods: A secure one-page secure web based voluntary reporting form was created and activated in 11/2016. Ten primary fields: clinical service, affiliated hospital, location of event, diagnosis, procedure performed, description of event, category of event (technical, equipment/supplies, policies, process or environment, operations, professionalism, other), and safety category (no harm, adverse event-no harm, adverse event-temporary harm, adverse event-permanent harm, adverse event-death, other) were collected. All data was de-identified, aggregated, and reviewed by department oversight committee with hospital affiliate attending, staff and trainee representation. More than two events across the affiliates resulted in evaluation of possible contributing human or system factors. Lessons learned and improvement opportunities were reported in aggregated form monthly at Grand Rounds.

Results: 65 reports were submitted through 12/2017 with a plateau of 10 reports/month. Faculty submitted 89% of the reports. 50% were from the private affiliate, 28% from the VA and 22% from the county. 67% of the events were reported from OR, and 16% from SICU. Reports were regarding hospital policies/processes/environmental issues(36%), equipment malfunction(34%), Judgment(10%) and communication failure(10%). 48% of reports resulted in no patient-harm, 22%-adverse event-no harm, 15%-adverse event-temporary harm and 4%-adverse event-permanent harm. Information gained identified common human and system factors across the affiliates that if considered individually would not have triggered an intervention.

Conclusions: Department-wide self-reporting of errors and safety issues improved situational awareness for residents and faculty, allowed for similar events at different hospitals to be reported resulting in educational interventions, and reports to hospital leadership all improving the delivery of safe and quality care to patients. Improving resident reporting is being investigated.

THE IMPACT OF SMOKING ON SURGICAL SITE INFECTIONS (SSIS) IN SMOKERS UNDERGOING ELECTIVE COLORECTAL SURGERY

ABSTRACT #60 REF: 11003357

Introduction: Smoking is associated with increased postoperative complications, specifically SSIs. A recent study showed that active smokers who smoked on the day of their elective surgery had an odds ratio of 1.96 (95% CI, 1.23-3.13; $p < 0.01$) [Nolan MB, et al.] for developing an SSI. Our objective was to compare the impact of smoking on SSI rates specifically in patients undergoing elective colorectal resections as this is not well characterized.

Methods: Elective colorectal surgeries between 1/1/13 and 11/14/17 were reviewed. Demographics and comorbidities (COPD, CAD, EtOH use, and BMI) were collected. Cases were stratified by smoking status: never (NS), any history of smoking (ES), or active (AS) smokers, operative approach (MIS vs. open), and right vs. left-sided colorectal resections. Univariate analysis was performed using Student's t-test and χ^2 .

Results: 510 cases were identified. There were no differences in demographics or comorbidities between groups. SSI rates were significantly higher in ES patients (12.5% vs. 5.5%, $p = 0.009$) and even more so for AS compared to NS (14.3% vs. 5.5%, $p = 0.006$). AS receiving open surgery had significantly higher SSI rates compared to NS (21.2% vs. 5.0%, $p = 0.004$). SSI rates in AS undergoing MIS was also higher but not significant (9.9% vs. 5.9%, $p = 0.3$). SSI rates were significantly higher in AS undergoing left-sided resections (15.3% vs. 5.0%, $p = 0.01$). For right-sided resections, the rate was higher but not significant (11.8% vs. 6.5%, $p = 0.3$). The highest SSI rate was observed in AS undergoing open left-sided resections (27.8% vs. 3.8%, $p = 0.001$).

Conclusions: Our study demonstrates that SSI rates are significantly higher after colorectal surgery in ES patients and even more so in active smokers. Active smokers undergoing open and left-sided resections developed the highest SSI rates. Improving smoking abstinence through a preoperative smoking cessation program and increasing MIS utilization would significantly impact SSI rates in colorectal surgery patients.

COMPARISON OF COSTS AND OUTCOMES FOR IN-OFFICE AND OPERATING ROOM EXCISION OF CUTANEOUS MALIGNANCIES

ABSTRACT #61 REF: 11003322

Introduction: The incidence of non-melanoma skin cancer (NMSC) has been estimated at 3.3 million patients yearly in the US. Veterans have been shown to be at increased risk. The purpose of our study is to investigate costs and outcomes treating NMSC in the operating room versus outpatient procedure clinic.

Methods: Study population consisted of patients with NMSC excised between December 1, 2015 and December 1, 2016 at Miami VA Hospital. All patients treated in the procedure clinic underwent excision and primary closure. For cost comparison, only patients treated in the operating room with excision and primary closure were included. Patients undergoing additional concurrent procedures were excluded from cost comparison. Procedure costs were estimated using CPT codes and 2017 conversion factor, \$35.7751. If multiple lesions were treated, cost per lesion treated was calculated.

Results: 65 patients underwent excision of 94 NMSCs in the operating room. Nineteen patients underwent excision of 20 NMSCs in the procedure clinic. One patient treated in the operating room required post-operative treatment with imiquimod for positive margins. One patient treated in clinic required excision in the operating room for positive margins. 33 patients managed in the operating room and 18 patients managed in the procedure clinic were included for cost analysis. Average cost per lesion excised in the operating room and procedure clinic were \$1940.60 +/- 684.99 and \$645.61 +/- 447.29, respectively ($p < 0.001$).

Conclusions: Cost to excise lesions in the operating room was triple the cost of excision in the procedure clinic. Of note, lesions excised in the clinic were noted to be smaller which may have a small effect upon cost calculation due to slight increase in reimbursement for treatment of larger lesions. With increased experience, we will continue delineating how to optimize utilization of the outpatient procedure clinic and provide patient centric cost effective treatment.

UPPER GASTROINTESTINAL HEMORRHAGE AND EPIDURAL CATHETER REMOVAL IN THE SETTING OF HEPARIN INDUCED THROMBOCYTOPENIA

ABSTRACT #62 REF: 11003272

We present a patient who underwent hemipelvectomy and post-operatively developed massive upper gastro-intestinal hemorrhage in the setting of Heparin Induced Thrombocytopenia (HIT). We also report epidural catheter removal in this thrombocytopenic patient.

A 65year old male underwent hemipelvectomy for chondrosarcoma. Epidural catheter was placed pre-operatively for pain control. Intraoperative blood loss was 7 liters; he was resuscitated with 11 units (U) packed red blood cells, 5 U FFP and 2 six-pack platelets. He was extubated on postoperative day (POD) 1. On POD 3, platelet count dropped to 25K. Heparin Induced Thrombocytopenia (HIT) was confirmed by laboratory testing. On POD 6, the epidural catheter was removed. Platelet transfusion was given prior to removal, increasing platelets from 50K to 78k. No complications (epidural hematoma or neurological deficits) ensued. DVT prophylaxis was switched to Fondaparinux when HIT was confirmed, and subsequently to Argatroban drip. However, he developed extensive deep venous thrombosis of bilateral lower extremities and pulmonary embolus following inferior vena cava filter placement.

Despite having no history of peptic ulcer disease, his post-operative course was complicated by acute development of perforated duodenal ulcer which required exploratory laparotomy with omental patch repair on POD 7. 14 days after laparotomy, he developed upper GI bleed with drop in hemoglobin requiring blood transfusion and intubation. Angiography with gastroduodenal artery embolization was performed, following which he stabilized and was extubated. However, recurrence of upper GI bleed occurred, with massive hematemesis, aspiration and cardiopulmonary arrest. He expired 28 days after the hemipelvectomy procedure.

Upper GI bleeding and epidural catheter removal in the setting of HIT have (to our knowledge) not been hitherto reported in the literature. HIT predisposes to thrombotic complications. Small vessel thrombosis may have contributed to ischemia of the duodenal mucosa which predisposed to ulcer formation. GI prophylaxis is indicated in thrombocytopenia associated with HIT.

NON-CIRRHOTIC HEPATOCELLULAR CARCINOMA IN THE VETERAN POPULATION: A NATIONAL PERSPECTIVE OF TRENDS AND RISK FACTORS

ABSTRACT #63 REF: 11003057

Introduction:

The incidence of hepatocellular carcinoma (HCC) has increased in Veterans. A great deal of attention has been placed on HCC occurring in the background of cirrhosis. The incidence and risks factors associated with non-cirrhotic liver HCC (NC-HCC) is currently unclear. This study aimed to identify and describe risk factors and trend of NC-HCC in Veterans such that preventive strategies can be implemented.

Methods:

VA Informatics and Computing Infrastructure (VINCI) was used to identify all patients with HCC from the VA Corporate Data Warehouse from 2000 to 2013. ICD-9 codes, serology testing and previously validated algorithms (using laboratory/clinical data) were used to identify NC-HCC patients, viral hepatitis (HBV/HCV), alcohol abuse (ETOH), non-alcoholic fatty liver disease (NAFLD), alcoholic liver disease (ALD), and additional risk factors. Incidence and rate of increase of NC-HCC were analyzed. The study period was divided in five 3-year periods and the changes in risk factors over time were analyzed using Chi-squared and Cochran-Armitage trend tests.

Results:

We identified 19,531 patients with a HCC diagnosis, of which 3,375(17%) were NC-HCC. There was a linear increase of new cases of NC-HCC of 9.5% per year ($P<0.01$). Patients were predominantly male (99%), White (63%), with a mean age of 67 ± 11 SD at diagnosis. The three most common risk factors for NC-HCC were NAFLD (33%), HCV (17%) and HCV+ETOH (15%). The rate of NAFLD and other risk factors was relatively constant in the five time-periods while there was a linear increase of HCV-ETOH over time ($P<0.001$).

Conclusions:

This is the first study reporting risk factors of NC-HCC in national dataset of Veteran patients. There is a concerning steady increase of new cases of NC-HCC. The main risk factors associated with NC-HCC are NAFLD, HCV and HCV-ETOH combined. The prevalence of HCV-ETOH in newly diagnosed NC-HCC significantly increased during the study period.

UTILIZATION OF A COMPREHENSIVE INPATIENT NUTRITIONAL SCREENING PROGRAM TO DETECT MALNUTRITION AMONG 1,454 VETERANS ADMITTED TO SURGICAL SERVICES AT A MAJOR QUATERNARY CARE CENTER

ABSTRACT #64 REF: 11002959

Introduction: In August 2015, a program was established at our institution to screen admitted veterans for malnutrition based on six clinical criteria proposed by leading dietetic organizations. We report here the results of this program among surgical patients.

Methods: With institutional review board approval, we retrospectively cross-referenced administrative and electronic medical records of patients admitted to our surgical units between 8/1/2015 and 11/29/2017. An automatic consult was generated to the dietitian if an initial validated, albeit cursory, 3-item screen for "at risk for malnutrition" was positive. Additionally, the primary team could consult the dietitian. Patients assessed by the dietitian were categorized into four groups: "moderate malnutrition," "severe malnutrition," "did not meet criteria," and "unable to assess." Reasons for this last category include missing anthropometric data or inability of the dietitian to perform a focused nutritional history and physical exam.

Results: Based on nursing or physician generated consults, 1,454 unique patients were screened for malnutrition during their inpatient admissions, 78% of which were following a surgical procedure. Overall, 380 patients (26.1%) met criteria for moderate or severe malnutrition (including 22.7% of all perioperative admissions), 516 (35.5%) did not meet malnutrition criteria, and 558 (38.4%) were not fully assessed. Patients with the highest rates of malnutrition were those admitted to head and neck surgery (38.2%), vascular surgery (34.2%), and general surgery/surgical oncology (32.2%).

Conclusions: To our knowledge, this is the largest report on the prevalence of malnutrition in the veteran surgical population using universally accepted clinical criteria. Our program reliably classified the nutritional status of more than 60% of surgery patients. Future efforts aim to maximize the completeness of our assessment, measure the long-term impact of this program on surgical outcomes and quality of life, and fully implement this program in the outpatient setting to afford an opportunity for preoperative intervention.

ENDOTOXEMIA AFTER PENETRATING OR BURN TRAUMA

ABSTRACT #65 REF: 11002568

Introduction

Recent studies show that lipopolysaccharide (LPS) endotoxemia is absent on admission, and develops in half of severely injured blunt trauma patients within 72 hours. This correlates with mortality regardless of gram negative sepsis. There are no comparable data in penetrating or burn patients. We hypothesized that LPS is present on admission after critically-ill penetrating and burn trauma.

Methods

Whole venous blood was collected from adults with penetrating or burn (>20% total body surface area) on day (D)1 and D3 of ICU admission. A chemiluminescent bio-assay based on the oxidative burst reaction of activated neutrophils to complement-coated LPS-IgM immune complexes (<http://www.spectraldx.com>) was performed. Data are expressed as mean±SD. Differences are assessed at $p<0.05$.

Results

The study population was 67% male, 35±15yrs with 17% mortality. LPS for the population was elevated from D1 vs D3 (0.39 ± 0.21 vs 0.63 ± 0.30 IU, $p=0.006$), with endotoxemia present in 83% by D3. In subgroup analyses, burn patients' D1 vs D3 LPS was 0.34 ± 0.22 vs 0.69 ± 0.30 IU ($p=0.03$) and was elevated in 89% by D3. For penetrating patients, D1 vs D3 LPS was 0.55 ± 0.53 vs 0.78 ± 0.44 IU ($p=0.11$.) and was elevated in 78% by D3. There were no differences between burn and penetrating LPS between D1 or D3 ($p=0.31$, $p=0.41$, respectively.) Of 13 patients who developed SIRS by D3, 67% had elevated LPS, while only 46% had positive cultures.

Conclusions

This is the first demonstration that endotoxemia occurs on admission in half of penetrating and burn patients and rises significantly thereafter. In contrast to previous studies in predominantly blunt patients, 83% of this population was endotoxemic by D3 suggesting an explanation for differences in inflammatory and compensatory responses based on injury mechanism. Additionally, LPS in the majority of patients with SIRS suggests an early marker for infection and a new potential therapeutic target following trauma.

PREDICTING FACTORS TO POSTOPERATIVE HYPOTENSION FOLLOWING CAROTID ARTERY STENTING

ABSTRACT #66 REF: 10989614

Objectives: To determine factors associated with hypotension following carotid artery stenting (CAS). In particular, this study evaluates whether involvement of the carotid bifurcation/bulb and degree of calcification can predict postoperative hypotension.

Methods: A retrospective review of 90 CAS performed in 88 patients at a single tertiary center was performed. In patients with proximal internal carotid stenosis involving the carotid bifurcation, extent of bifurcation/bulb calcification on preoperative computed angiogram (CTA) was assessed using a scoring system. Calcium scores were assigned based on percent of circumferential calcification of carotid bifurcation as follows: grade 1, 90%. Perioperative factors associated with postoperative hypotension requiring vasopressor were analyzed.

Results: Overall, postoperative hypotension requiring vasopressors occurred in 26 (28.9%) of CAS. There were no differences in baseline demographics, co-morbidities, or CAS indication between patients that required postoperative vasopressors for hypotension and those that did not. Majority of patients (64.4%) were on two or more antihypertensive medications preoperatively. Stenosis involved the carotid bifurcation in 64 (71.1%) cases. Of these, 27 (42.2%) were grade 1, 19 (29.7%) were grade 2, 10 (15.6%) were grade 3, and 8 (12.5%) were grade 4 based on our calcium scoring system. On risk-adjusted analysis, carotid bifurcation/bulb involvement (aOR 4.5, 95% CI 1.1-18.5) and preoperative regimen of 2 or more anti-hypertensives (aOR 4.2, 95% CI 1.1-16.0) were independent predictors of hypotension requiring vasopressors following CAS. Among patients with carotid bifurcation involvement, severity of calcium score was not a significant predictor of postoperative hypotension.

Conclusions: CAS for carotid stenosis involving the carotid bifurcation/bulb is associated with a higher risk for postoperative hypotension requiring vasopressors. Patients with preoperative hypertension requiring 2 or more anti-hypertensive medications are also at increased risk. However, severity of carotid bifurcation calcification is not a significant predictor of need for postoperative vasopressors.

EARLY ACTIVE RANGE OF MOTION FOLLOWING AXILLARY BURN CONTRACTURE RELEASE USING DERMAL SUBSTITUTE AND NEGATIVE PRESSURE THERAPY

ABSTRACT #67 REF: 10982171

Introduction: Burn scar contractures to the axilla are functionally devastating, and represent a reconstructive challenge for surgeons. Dermal substitutes have proven to be a valuable option, but often require significant postoperative immobilization. This study investigates a series of axillary burn contractures treated with dermal substitute and negative pressure therapy as the only immobilization postoperatively.

Methods: A retrospective review was performed to identify patients who underwent axillary burn scar contracture release with dermal substitute (Integra) and negative pressure therapy. Early active range of motion was started on POD1. Data including demographic information, grade of contracture according to Kurtzmann, size of Integra placed in the excised wound, thickness of the graft, pre-operative active range of motion measurements (AROM) and post-operative AROM was obtained.

Results: Thirteen patients with twenty axillae were included. Five axillae were classified as Kurtzmann type IA, five as type II and ten as type III. The size of the two-layer dermal regeneration template placed in the excised wounds range from 100cm² to 450cm². Mean active shoulder flexion increased by 38% and mean active shoulder abduction increased by 36%. Eight patients with eleven sites attained normal AROM in flexion (>150°) and nine patients with eleven sites attained normal AROM in abduction (>150°). No major complications or graft loss were recorded.

Conclusion: Dermal substitutes with negative pressure therapy should be considered for axillary burn contracture reconstruction. This study provides a useful algorithm for using dermal substitutes, and demonstrates an early range of motion protocol without the need for long term immobilization.

COULD RETAINED BULLET FRAGMENTS BE A SIGNIFICANT SOURCE OF BLOOD LEAD LEVELS IN TRAUMA PATIENTS?

ABSTRACT #68 REF: 10981959

Introduction:

On Feb 17, 2017, the CDC reported that retained bullet fragments (RBF) may be a source of elevated blood lead levels (BLL) in those with no other known exposure. This was based on voluntary reports of $BLL > 10 \mu\text{g}/\text{dl}$ to the CDC. Approximately 75,000 non-fatal firearm injuries occur annually in the United States and routine screening for BLL is rarely performed. Thus, the incidence and magnitude of BLLs from RBF, and the associated public health implications are unknown. We test the hypothesis that BLLs are elevated in trauma patients with RBF.

Methods:

BLL were measured in 50 consecutive adult patients with imaging-proven RBF admitted to an American College of Surgeon's verified level 1 trauma center from 2/15/17-12/14/17. BLL was considered elevated at $\geq 5 \mu\text{g}/\text{dL}$. Data are expressed as mean \pm SD if parametric and median if nonparametric. Differences are assessed at $p < 0.05$.

Results:

The study population is 86% male, 34 ± 14 yrs, $27 \pm 4 \text{ kg}/\text{m}^2$, and 60% African American. Fifteen patients (30%) had $BLL \geq 5 \mu\text{g}/\text{dl}$ and thirty-three patients (66%) had detectable BLL. Median exposure of patients with BLL under $5 \mu\text{g}/\text{dl}$ was 10 [4-330] days, whereas median exposure of patients with $BLL \geq 5 \mu\text{g}/\text{dl}$ was 30 [3-280] days.

Conclusions:

These preliminary data provide basic proof of concept that measurable BLL occur in over half of trauma patients with RBF, regardless of days exposed. The CDC reports that any measurable BLL is unsafe, but deleterious effects include impaired renal function with $BLL < 5 \mu\text{g}/\text{dL}$, an increased risk for hypertension and essential tremor with BLL between 5-10 $\mu\text{g}/\text{dL}$, and neurocognitive deficits and adverse reproductive outcomes (including spontaneous abortion and reduced birthweight) with $BLL \geq 10 \mu\text{g}/\text{dL}$. Thus, patients with RBF may benefit from precautionary counseling on lead poisoning and the importance of baseline and periodic monitoring and, in select cases, the benefits of surgical retrieval may exceed the risks.

EARLY RESULTS OF A PILOT PREOPERATIVE NUTRITIONAL QUALITY IMPROVEMENT PROGRAM AMONG VETERANS WITH DIGESTIVE TRACT MALIGNANCIES

ABSTRACT #69 REF: 10981663

Introduction: A 2012 consensus statement issued by leading dietetic organizations standardized six clinical characteristics to identify and support a diagnosis of malnutrition. We implemented a pilot nutritional quality improvement program to detect and address malnutrition (based on these clinical criteria) among veterans at the time of initial referral to our surgical oncology clinics.

Methods: Our institutional oncology database was queried for patients enrolled in this program. Between January and September 2017, new patients to our Surgical Oncology and Hepatopancreatobiliary clinics were referred to our outpatient oncology dietitian based upon patient and dietitian availability. Patients who met two or more of the six clinical criteria (insufficient energy intake, weight loss, muscle mass loss, subcutaneous fat loss, fluid accumulation, and reduced grip strength) were diagnosed with malnutrition, the severity of which was determined by the extent of the deficits. The dietitian then provided individualized nutritional counseling and supplementation as appropriate.

Results: 33 individuals (ages 30-80, all male) were assessed by our oncology dietitian following initial surgical oncology evaluation. Of these, 20 (61%) met criteria for moderate or severe malnutrition; their median serum albumin level was 3.5 (range 2.2-4.3) g/dL, with 15 (75%) patients having serum albumin ≥ 3.0 g/dL. Their most common diagnoses included gastric, pancreatic, and hepatobiliary (20% each) cancers. Nutritional interventions included oral supplementation (80%) and nutritional counseling (100%). To date, 12 of these patients have undergone surgery, with the remainder currently receiving neoadjuvant therapy or having refused surgery. Major complications developed in one patient, consisting of a surgical site infection.

Conclusion: Malnutrition is highly prevalent among veterans with digestive tract malignancies. The implementation of a preoperative nutritional quality improvement program was successful in detecting malnourished patients who might benefit from nutritional interventions, with the potential to improve perioperative and oncologic outcomes. Long-term evaluation of the program is underway.

IMPACT OF PREOPERATIVE ANEMIA AND PERIOPERATIVE TRANSFUSION ON POSTOPERATIVE OUTCOMES AFTER COLECTOMY IN 42,530 COLON CANCER PATIENTS

ABSTRACT #70 REF: 10981116

Introduction Preoperative anemia increases postoperative complications after colectomy for colon cancer. However, the impact of perioperative (intra- and/or post-operative) blood transfusion on postoperative complications is unclear.

Methods We identified patients from the American College of Surgeons National Surgical Quality Improvement Program (NSQIP) database 2006-2015 who underwent colectomy for colon cancer. Multivariate logistic regression model was employed to assess independent and joint effects of preoperative anemia and perioperative blood transfusion on postoperative complications and mortality.

Results A total of 42,530 patients (67.9% left colon cancer (LCC) and 32.1% right colon cancer (RCC)) were identified. LCC patients were less likely to have moderate/severe anemia compared to RCC patients (54.3% vs. 66.7%). Less than 10% of the patients received perioperative blood transfusion (9.2% for RCC, 7.0% for LCC). Moderate/severe anemia was associated with an increased risk of complications (OR=1.11, 95% CI: 1.05-1.19) and death (OR=1.06, 95% CI: 1.05-1.06), while blood transfusion was associated with greater increased risk of complications (OR=1.67, 95%CI: 1.53-1.83) and death (OR=1.71, 95%CI:1.70-1.72). Compared to patients with no/mild anemia and without transfusion, patients with no/mild anemia and transfusion had the highest risk of complication (OR=3.13, 95% CI: 2.43-4.02) followed by the patients who had moderate/severe anemia and transfusion (OR=1.78, 95%CI: 1.61-1.97). The risk of death was the highest among patients who had moderate/severe anemia and transfusion (OR=1.75, 95%CI: 1.74-1.76) followed by patients who had no/mild anemia and transfusion (OR=1.54, 95% CI: 1.51-1.57). There was no difference between LCC and RCC.

Conclusions The study confirms that anemia is associated with increased risk of postoperative complications and death for colon cancer patients undergoing colectomy. The study also found that perioperative blood transfusion posed greater risk of complications and death, suggesting that perioperative blood transfusion should be judiciously administered, particularly in no/mild anemia.

RECENT TRENDS IN MINIMALLY INVASIVE APPROACHES TO THE INGUINAL HERNIA REPAIR

ABSTRACT #71 REF: 10980226

INTRODUCTION: The dissemination of laparoscopic inguinal hernia repair (IHR) has been limited despite reported advantages over open IHR. By comparison, the robotic-assisted approach is increasingly used, and its safety and feasibility have been described. The goal of this study is to evaluate recent trends in minimally invasive IHR in our institution.

METHODS: Using ORControl software, patients who underwent IHR at our institution from Nov 1, 2014 to Oct 31, 2017 were identified. The demographic and clinical data were gathered. Patients were divided into three periods – the year prior to adoption of the robotic-assisted approach (2014-2015), the first year of our experience (2015-2016), and the second year (2016-2017). Trends in surgical approaches to IHR were evaluated over these periods.

RESULTS: During these periods, we performed a total of 574 IHR. The patients' age ranged from 23-94 years. The median ASA score was 3 for all three groups. 112 (19.5%) patients underwent bilateral IHR, 56 (9.8%) patients a unilateral recurrent IHR. During the first period, 20 of 180 (11.1%) patients had a laparoscopic IHR with one conversion to open. During the second study period, 28 of 200 (14%) patients had a minimally invasive IHR (19 robotic-assisted and 9 laparoscopic). During the most recent period, 40 of 194 (20.6%) patients underwent a minimally invasive IHR (28 robotic assisted and 12 laparoscopic with one conversion to open). For patients with either bilateral or recurrent inguinal hernia, the rate of minimally invasive IHR was 34% during the first study period. With adoption of the robotic platform, the rate increased to 39% and 68% during the most recent period.

CONCLUSIONS: With growing experience with the robotic platform, the rate of minimally invasive IHR has increased in our institution. Given this recent interest in robotic-assisted IHR, further investigation evaluating short and long-term clinical outcomes is warranted.

THE COMBINATION OF RADIOFREQUENCY ABLATION WITH TRANSCATHETER ARTERIAL CHEMOEMBOLIZATION IMPROVES SURVIVAL FOR HEPATOCELLULAR CARCINOMA IN SUBOPTIMAL LOCATIONS

ABSTRACT #72 REF: 10978407

Transcatheter arterial chemoembolization (TACE) and radiofrequency ablation (RFA) is a widely used local ablative therapy for the unresectable hepatocellular carcinoma (HCC) and occasionally in combination as bridging therapy for liver transplantation. The goal of our study was to assess the outcomes of the TACE in combination with RFA among the Veteran Affairs (VA) patient population with unresectable advanced HCC not eligible for liver transplant.

Methods: We performed a retrospective review of 385 consecutive adult patients with HCC who underwent TACE or RFA between 2007 and 2015 in the VA Health Care System. Clinical, demographic, imaging and procedural data were obtained. The primary outcome was overall survival in patients among those who received TACE alone compared to TACE+RFA.

Results: 107 patients with unresectable HCC were included in our final analysis. Of those, 41 (38.3%) received TACE, and 27 (25.2%) had TACE+ RFA. Mean age at diagnosis was 59.8. Mean AFP before TACE was 1159.4 ng/dl with the MELD-Na score of 11.67. Among treated tumors, 32.4% were located in the hepatic dome, and 13.2% were subcapsular, 10.3% had the bilobar disease. Mean tumor diameter was 2.87 cm. In 72.1% patients, an additional procedure (TACE or RFA) was required to treat the remaining disease. Median survival was 19 and 44 months in the TACE vs. TACE + RFA group, respectively. Overall survival was significantly longer in the group with TACE+ RFA compared to the TACE only (18.5% vs 63.4% at 24 months, and 77.8% vs. 90.2% at 60 months, respectively), $p=0.019$.

Conclusion: Use of TACE in combination with RFA on the lesions in difficult to access locations improves overall survival. Utilization of the multiple sessions of TACE or RFA is justifiable to achieve disease control in the settings of multifocal disease. Minimally invasive techniques should be considered to improve anatomic access for RFA.

“DISPARITY IN ROBOTIC ASSISTED GENERAL SURGERY: AN ANALYSIS OF NATIONAL INPATIENT SAMPLE.”

ABSTRACT #73 REF: 10978278

Introduction:

Robotic assisted laparoscopic General Surgery procedures including cholecystectomy, ventral hernia, inguinal hernia, and colectomy are increasing in the United States. It is unclear if race and insurance status influence access to robotic assisted laparoscopic operations.

Methods:

The National Inpatient Sample from 2012-2014 was queried for the most common laparoscopic and robotic assisted laparoscopic procedures including cholecystectomy, ventral hernia, inguinal hernia, and colectomy. After adjusting for patient characteristics, the influence of race and insurance status on access to robotic assisted general surgery procedures were analyzed using logistic regression.

Results:

Regarding race, Black patients were as likely to receive robotic assisted cholecystectomy (OR 1.21, 95%CI 0.99–1.47), ventral hernia (OR 0.89, 95%CI 0.47-1.67), inguinal hernia (OR 1.43, 95%CI 0.60-3.43), or colectomy (OR 1.08, 95%CI 0.87-1.36) as White patients for all analyzed procedures. Similarly, there was no difference in access to robotic assisted procedures among patients with Medicare or Medicaid when compared to private insurance for cholecystectomy, inguinal hernia, and colectomy. However, patients with Medicaid were less likely to undergo robotic ventral hernia (OR 0.47, 95%CI 0.25-0.86). Patients without health insurance were also less likely to have robotic cholecystectomy (OR 0.61, 95%CI 0.48-0.76).

Conclusions:

There does not appear to be significant racial disparity in access to robotic assisted General Surgery procedures including cholecystectomy, ventral hernias, inguinal hernias, and colectomies. However, health insurance status, specifically Medicaid and self-pay were less likely to receive some robotic assisted procedures.

EXPANDING PLEURAL INFILTRATING T-CELLS FROM MALIGNANT PLEURAL EFFUSIONS AS A SOURCE OF TUMOR SPECIFIC IMMUNE CELLS IN ADVANCED CANCER

ABSTRACT #74 REF: 10977315

Introduction:

Immunotherapy, including patient-derived tumor infiltrating lymphocytes and immune checkpoint antibodies, is revolutionizing cancer treatment. Malignant pleural effusions (MPEs) occur when cancer infiltrates the thoracic cavity, resulting in accumulated fluid that is often rich in tumor and pleural infiltrating T-cells (PITs). The objective of this study is to determine if the PITs can be isolated and expanded ex-vivo, to be a readily accessible source of tumor specific infiltrating lymphocytes.

Methods:

We used flow cytometry to isolate T-cells and survey cell surface expression of 270 markers from breast (n=5) and non-small cell lung cancer (n=6) MPEs, and compared expression on T-cell subsets with peripheral blood counterparts. T-cells were expanded using anti-CD3/CD28 microbeads and IL-2. T-cells were defined as CD45+/CD3+/CD4+ or CD8+, NK cells as CD45+CD3-CD8+/dim and CD56+, and NK-T as CD3+CD56+.

Results:

CD4+ T-cells comprised 5% (3-10%) of nucleated cells. Both CD4+ and CD8+ PITs were uniformly PD1+/CD279+ (98.1%, SD=3.67%). NK cells were virtually absent (mean=0.5% ± 0.40 SD). CD45+/CD3+ PITs were isolated by flow cytometry (1 x 10⁶) and were expanded using anti-CD3/CD28 microbeads and IL-2, yielding a 20-fold expansion after 2 weeks. The surface proteomic profiling of short-term expanded PITs (2 passages) revealed an almost equal distribution of CD4+ (30.6±2.02%) and CD8+ (44.8±0.6%) cells. Expanded CD4+ and CD8+ cells significantly downmodulated PD-1 (28.1% and 9.4%, respectively), while upregulating IL-2R/CD25 (30.1% and 13.9%), indicative of IL-2 driven expansion. A minor subset of CD4+ cells co-expressed CD200 (OX2), a molecule involved in macrophage polarization. Most CD4+ (but not CD8+) cells expressed CD28 and CCR6, but not CCR3, CCR7, CCR5, or CCR9.

Conclusions:

PITs can be expanded ex-vivo as a source of tumor specific immune cells. Many patients with MPEs have indwelling pleural catheters, which may be the ideal situation to access, isolate, and expand PITs for immunotherapy.

POSTOPERATIVE NARCOTIC PRESCRIPTIONS: HOW MUCH IS TOO MUCH?

ABSTRACT #75 REF: 10977110

Introduction: The opioid epidemic cost 33,000 American lives in 2015 and the country more than \$500 billion in 2016. National attention is focused on combating this problem from federal programs down to community efforts. Surgical patients represent a population at risk for opioid overuse and prescribers should be aware of their role in solving the epidemic. Despite the evidence that these prescriptions contribute to unnecessary long-term use, there is a lack of guidelines for prescribing narcotics after surgery.

Methods: Investigators examined outpatient narcotic and non-narcotic prescriptions given to opioid-naïve post-surgical patients at the Miami VA. The study included opioid-naïve patients undergoing general or orthopedic inpatient and outpatient surgeries who received home narcotic prescriptions from October 1, 2017 to the present. Average dosages were calculated using morphine equivalents. Researchers then performed telephone surveys to assess opioid usage.

Results: Sixty-seven patients were surveyed. A total of 13312 morphine equivalents were prescribed with an average of 117 equivalents per general surgery patient and 299 equivalents per orthopedic patient. A total of 5591 equivalents were used by patients resulting in 58% of outpatient narcotics, or 1029 5-mg oxycodone pills, going unused. Thirty-six percent of patients were counseled on use of NSAID or acetaminophen and 22% of patients received non-narcotic prescriptions for these medications. Only eleven percent of patients had uncontrolled pain at home and only 4% asked for refills. Thirty-nine percent of patients were counseled on potential side-effects of narcotics.

Conclusion: Surgical patients at the Miami VA may not require as many outpatient narcotics as are currently prescribed. A protocol for narcotic and non-narcotic prescriptions could be modeled on those found in the literature and based on average patient use found in our survey. Investigators are continuing surveys and developing a protocol that could be used by surgeons throughout the VA system.

ROUX-EN-Y GASTRIC BYPASS IS A SAFE AND EFFECTIVE OPTION THAT IMPROVES MAJOR CO-MORBIDITIES ASSOCIATED WITH OBESITY IN ELDERLY AND VETERAN POPULATIONS

ABSTRACT #76 REF: 10974212

Introduction: Over one-third of veterans suffer from obesity and associated comorbidities, but recent studies show that bariatric surgery, while highly effective, is seldom offered. Long-term gastric bypass outcomes in high-risk, elderly populations is scarce, and detailed data is needed to support increased referral for bariatric surgery in veteran populations.

Methods: We reviewed outcomes of 308 Roux-en-Y gastric bypass (RYGB) cases performed at a major VA Medical Center (1995-2017). Patients were 69% male, average age 52 (range 24-71 years), mean initial BMI 47. Preoperative comorbidity included: diabetes 52%, sleep apnea 65%, hypertension 75%, hyperlipidemia 48%, GERD 39%, NASH 12%, DJD 76%. Using prospective surgical follow-up information, CPRS/Vista data, vitals, progress notes, pharmacy, and laboratory data, we analyzed immediate and long-term outcomes (mean 8 years, range 0.5-15 years) for open (1995-2015) and laparoscopic (2005-2015) RYGB procedures.

Results: 145 (47%) cases were open, 158 (51%) laparoscopic (Lap), and 5 laparoscopic-to-open (4 with previous laparotomies). Immediate outcomes were: 30-day mortality- Open: 1.3%, Lap 0%; Anastomotic leak- open: 0.66% (one re-do procedure), Lap 0%; Gastric-staple line leak- 1 each Open (0.66%) and Lap (0.6%). Overall, complications occurred in 98 (31.8%) cases: 64 (21%) Clavien-Dindo grade I-II and 34 (11%) grade >3. For long-term follow-up, complete (up-to-date) or >5 year outcomes were available in 285 (92.5%) cases. At 5, 10, and 15 years, average BMI decreased from 47 to 33.3, 33.7, and 31 respectively, while excess body weight loss was 68%, 68%, and 80%, respectively. Comorbidity resolution / improvement was dramatic: diabetes- 79%/20%, sleep apnea- 75%/8%, hyperlipidemia- 70%/28%, GERD- 78%/9%, hypertension- 49%/31%, NASH- 83%/14%, and DJD- 26%/64%.

Conclusions: Roux-en-Y gastric bypass offers sustained, long-term weight loss with significant resolution of major comorbidities in veteran populations; it can be performed safely with acceptably low morbidity and mortality rates. This data supports utilization of RYGB in veteran populations.

IS INGUINAL HERNIA SURGERY MORE DIFFICULT UNDER LOCAL ANESTHESIA COMPARED TO GENERAL ANESTHESIA?

ABSTRACT #77 REF: 10973695

INTRODUCTION

Performing inguinal hernia repair under local anesthesia reduces morbidity, unplanned admissions, and total operative time relative to general anesthesia, but ~90% of hernias in VA are done under general anesthesia. We hypothesized that the use of local anesthesia for inguinal hernia repair is limited by a perception that the operation is more difficult and therefore takes longer for the surgeon than when patients are asleep. The purpose of this study is to evaluate whether inguinal hernia repair might be more difficult under local anesthesia than under general anesthesia, by comparing time from incision to closure.

METHODS

We prospectively collected data on 783 consecutive Veterans undergoing elective unilateral inguinal hernia repair at our VA. We used propensity matching to adjust for known confounding and to compare operative time (incision to closure) and overall morbidity.

RESULTS

Local anesthesia was used for 55 (8%) of Veterans and general anesthesia for 728 (92%). Patients having repair under local were older (median age 70 vs 62, $p < 0.001$), more likely to be American Society of Anesthesiologists class 4 (35% vs 3%, $p < 0.001$), thinner (BMI 25 vs 26, $p < 0.04$), and had lower preoperative albumin levels (3.9 mg/dL vs 4.1, $p < 0.005$). After propensity matching, there were no significant differences in the above variables. Operative time for hernias under local (52 minutes) was significantly shorter than for general anesthesia (63 minutes), with an average treatment effect of 13 minutes (95% confidence interval 20.6-6.2 minutes), while overall morbidity was similar at 5% for each group.

CONCLUSIONS

Inguinal hernia repair under local anesthesia does not take longer to perform than the same operation under general anesthesia, and has similar short-term results. Greater use of local anesthesia for hernia repair could advance several core VA missions, including more efficient use of the operating room and excellent outcomes for Veterans.

NATIONWIDE TRENDS AND OUTCOMES OF CARDIOVASCULAR SURGERY IN PATIENTS WITH OPIOID USE DISORDERS

ABSTRACT #78 REF: 10973195

Introduction: Opioid abuse is currently a major healthcare crisis. There is a lack of knowledge regarding the prevalence and impact of high-risk opioid use among cardiac surgery (CS) patients. We sought to use a large national database to characterize this population and investigate the effect of opioid use disorder (OUD) on CS outcomes.

Methods: Of 5,718,552 patients undergoing coronary artery bypass graft, valve, or aortic surgery between 1998-2013, 11,359 (0.2%) OUD patients were identified from the Nationwide Inpatient Sample. Multivariable regression modeling and 1:1 propensity-score matching were used to determine the effect of OUD on CS outcomes.

Results: The prevalence of OUD in CS patients increased from 0.06% to 0.54% ($p < 0.0001$). OUD patients were more often younger, male, black or Hispanic, on Medicaid or uninsured, low income, and having valve surgeries. There was no difference in mortality ($p = 0.68$), but OUD patients suffered more complications (68% vs 53%; $p < 0.0001$) including stroke (5% vs 3%; $p = 0.0005$), pulmonary embolism (7% vs 2%; $p < 0.0001$), respiratory failure (15% vs 11%; $p = 0.0002$), prolonged ventilation (18% vs 14%; $p = 0.0001$), blood transfusion (30% vs 24%; $p < 0.0001$), renal failure (17% vs 12%; $p < 0.0001$), pneumonia (12% vs 8%; $p = 0.0002$), prolonged postoperative pain (2% vs 1%; $p = 0.01$), and sepsis (17% vs 9%; $p < 0.0001$). There was no difference in wound infections, deep vein thrombosis, or gastrointestinal complications. OUD significantly increased the median length of stay (11 ± 0.30 vs 8 ± 0.15 days; $p < 0.0001$) and mean cost/case by \$8,174 ($p < 0.0001$). Hospital volumes above 200 CS cases/year were protective against both mortality and morbidity among OUD patients.

Conclusions: The population of patients with OUD undergoing CS has dramatically increased over the past decade. CS in patients with OUDs is safe, though accompanied by a higher burden of morbidity and cost. Better outcomes may be achieved at high-volume centers.

POST-ACUTE CARE AMONG OLDER ADULTS TREATED FOR STAGE I-III COLORECTAL CANCER COMPARED TO THE GENERAL POPULATION

ABSTRACT #79 REF: 10970135

INTRODUCTION

Older adults are at risk for functional decline after cancer therapy and may rely on post-acute care (skilled nursing, rehabilitation, long-term care, nursing homes, and home health) for recovery. There is little information on the long-term utilization of post-acute care after surgery by older (>65y) adults with colorectal cancer compared to individuals without cancer.

METHODS

We evaluated individuals from SEER-Medicare treated for stage I-III colorectal cancer between 1/1/2000 and 12/31/2011 (n=43,902). We compared patients with cancer to non-cancer Medicare beneficiaries who were hospitalized for non-cancer treatment during the study period after matching on age, sex, race, comorbidity and Medicaid dual-eligibility. We compared incident post-acute care claims (skilled nursing, nursing home, rehabilitation, long-term care, or home health) within 5 years of colorectal cancer surgery.

RESULTS

The median age at surgery for older adults with colorectal cancer was 77y (66-105). All patients had surgery, 34% also received chemotherapy, 12% underwent radiation, and 29% received both surgery and adjuvant chemotherapy. The 5-year cumulative incidence of post-acute care claims was 62.3% for cancer survivors and 45.9% for controls, with the greatest difference seen ≤ 3 y from surgery ($p < 0.001$). In the 3 years following surgery, survivors between 66-70y (HR 2.4, 95% CI 2.3-2.5) and 71-75y (HR 2.3, 95% CI 2.22-2.39) were more than twice as likely to use post-acute care than non-cancer controls. Examination of the types of post-acute care demonstrated that cancer survivors were more likely to have prolonged stays in post-acute care facilities (5-year cumulative incidence 35% vs 29% $p < 0.001$) and were more reliant on home health (34% vs 21% $p < 0.001$).

CONCLUSIONS

To meet the needs of older adults with colorectal cancer, survivorship planning should include discussion about the likelihood of requiring post-acute care following cancer therapy, even several years after treatment.

PATIENT-REPORTED OUTCOMES AFTER SURGICAL TREATMENT OF FACIAL NON-MELANOMA SKIN CANCER

ABSTRACT #80 REF: 10970089

Purpose:

Non-melanoma skin cancer (NMSC) is the most common malignancy in the United States. After biopsy confirmation, recommended treatment is complete surgical excision. The face is the most common location for NMSC. FACE-Q is a validated, patient-reported outcome (PRO) instrument used to quantify health-related quality of life (QOL) after surgery. The purpose of this study is to measure PROs and identify factors associated with patient satisfaction after excision of facial NMSC in the veteran population.

Methods:

During the study period (March – June 2017), all patients with facial NMSCs were invited to complete a pre-operative FACE-Q. Participants were sent additional surveys at one- and six- months post-operatively. Variables, including patient and tumor characteristics, type of procedure, and complications, were collected. Statistical analysis was performed in SPSS.

Results:

Thirty patients completed pre-operative FACE-Qs; 18 patients (60.0%) returned the one-month and 13 patients (43.3%) completed the six-month post-operative surveys. Average age at surgery was 74.5 years and the majority of patients were male (93.3%). Twenty-three lesions were basal cell carcinoma (67.6%) and eleven were squamous cell carcinoma (32.4%). The most common lesion location was the cheek (35.3%) and average maximum lesion dimension was 15.8 mm. Most excision defects were closed primarily (94.1%).

Overall, veterans were satisfied with their facial appearance, not bothered by scars, and had low levels of appearance-related psychosocial distress, both before and after surgery. Patients tended to be happier with their appearance post-operatively and more satisfied with their scars with time. Average level of cancer worry decreased after excision.

Conclusion:

Our preliminary data shows that the FACE-Q can be used to study the impact of facial skin cancer surgery from the veterans' perspective. By quantifying patient satisfaction and aspects of health-related QOL, the FACE-Q can support quality metrics and help increase patient satisfaction after NMSC surgery.

NEUROPHYSIOLOGICAL CHANGES IMPACTING HAND FUNCTION AFTER ARTERIOVENOUS HEMODIALYSIS FISTULA PLACEMENT

ABSTRACT #81 REF: 10966722

Introduction: Hemodialysis(HD) patients frequently experience perturbations in hand function after arteriovenous fistula(AVF) placement and most attribute this to access-related hand dysfunction(ARHD). However, neuromotor changes modulating the spectrum of hand function after AVF placement are poorly understood. The aim of this study was to examine changes in neurophysiological and biomechanical outcomes after AVF surgery.

Methods: Fifty-one patients prospectively underwent nerve conduction studies(NCS) and biomechanical testing on the median and ulnar nerves pre-operatively, as well as 6-weeks and 6-months post-operatively. Mixed effect logistic regression was used to characterize NCS parameters and determine effects of hand dominance, AVF configuration (radial vs. brachial), HD status, and diabetes mellitus(DM). Associations between changes in NCS parameters and concurrent biomechanical tests(Grip strength and Purdue peg board dexterity assessment) were determined.

Results: Decreased amplitude, conduction velocity(CV) and increased F-latency of the median and ulnar motor nerves were linearly associated with worsening grip strength and peg board dexterity. In both motor and sensory domains, diabetic patients showed nerve conduction impairment at baseline. Diabetic patients also experienced more significant decreases in median and ulnar nerve amplitude, CV, and reciprocal increases in F-latency($P<0.05$) at 6-week and 6-months following AVF placement. Patients on HD had diminished ulnar motor and sensory nerve CV at baseline($P<0.05$) which was further exacerbated AVF placement($P<0.05$). Hand dominance and AVF configuration did not significantly influence change in neurophysiologic or biomechanical outcomes.

Conclusion: This is the first description of the temporal changes in neurological and biomechanical outcomes after AVF placement, demonstrating that ARHD is associated with alterations in the electrophysiology of the motor and sensory components of the median and ulnar nerves. Diabetes and dialysis status have significant effects on hand outcomes, highlighting the importance of identifying opportunities to mitigate the injury-response following AVF placement.

EFFICACY OF E-CONSULTS FOR PATIENTS WITH VASCULAR DISEASE

ABSTRACT #82 REF: 10955752

Introduction

Electronic consults (e-consults) play an increasingly important role in the comprehensive care of patients with vascular disease. However, there is little data regarding the use and outcomes of e-consults. We examined e-consults completed by a vascular surgery service to better define type of disease, consult utilization, and compliance with recommendations.

Methods

A retrospective review was performed of all e-consults completed by the vascular surgery service at the Ann Arbor VA between December 2012 and July 2013. Patient demographics and comorbidities, including hypertension, coronary artery disease (CAD), diabetes, and nicotine dependence were collected. E-Consult recommendations and patient/provider compliance with those recommendations were collected by chart review.

Results

A total of 250 e-consults were completed for 239 patients. 232 patients (97.1%) were male. Mean age was 66.5 (9.7) years. Among these patients, 134 (56.1%) were current smokers, 208 (87.0%) had hypertension, 161 (67.4%) had CAD, and 110 (46.0%) had diabetes. The most common reasons for e-consultation were peripheral arterial disease (36.8%), asymptomatic carotid occlusive disease (22.0%), aneurysm (20.8%), and varicose veins (6.8%). Prescription recommendations by the vascular service included 44 recommendations (17.6%) for a statin agent, with 13.6% compliance; 45 (18.0%) for Cilostazol, with 60% compliance; and 73 for aspirin or an antiplatelet (29.2%), with 57.2% compliance. 36 consults (14.4%) recommended tobacco cessation, with 11% compliance. Non-invasive diagnostic imaging was recommended for 196 (78.4%) consults, with 48.5% compliance. Interventions or re-interventions were recommended in 4 consults (1.6%), with 100% compliance. Fifteen consults (6.0%) recommended conversion to traditional consultation, with 53.3% compliance.

Conclusion

With the VA vascular service, e-Consults provide an effective means of triaging and providing recommendations for patients with vascular disease. There is discrepancy between e-consult recommendations given and patient/provider compliance that requires further work to improve compliance. Future work will explore the long-term outcomes of patients served by e-consults.

ROUTINE POSTOPERATIVE GASTROGRAFIN UGI FOLLOWING SLEEVE GASTRECTOMY SHOULD BE ABANDONED.

ABSTRACT #83 REF: 10952901

INTRODUCTION: Staple line leaks following laparoscopic sleeve gastrectomy (LSG) occur in 1-7% of cases and are a major source of morbidity and occasionally mortality. Leaks typically occur near the gastroesophageal junction and are difficult to treat. Routine early gastrografin upper gastrointestinal (GUGI) studies have been advocated by many centers, including ours, with the goal of early detection and improved outcomes. Problematic is the fact that 80% of leaks are diagnosed after hospital discharge.

METHODS: This was a retrospective chart review from a single surgeon using a standard surgical approach from Jesse Brown VA. All LSGs between 1/2010 and 8/2017 were included. Data collected included patient demographics, number of GUGIs, and perioperative outcomes. Sensitivity, specificity, and positive and negative predictive values were calculated. A cost analysis was also performed.

RESULTS: The study included 197 patients, 140 men and 57 women. Average age was 51.5 (SD=9.8); average BMI was 44.5 (SD=5.8). There were 200 GUGI studies performed on POD 1 or 2 to assess for staple line leak. There were 197 unequivocally negative exams. Three studies were false positive and one prompted reoperation. The false positive rate was 1.5%. Two leaks developed after discharge on POD 3 and 6, both detected by CT and confirmed at reoperation at outside institutions. The overall leak rate was 1.0%. Sensitivity and positive predictive values of GUGIs were 0% due to the lack of early leaks. Specificity was 98.5% and negative predictive value was 100%. The cost of the 200 exams was \$168,000 including interpretation fees.

CONCLUSIONS: The cost, false positive rate, and absence of early leaks during hospitalization support the practice of abandoning routine POD 1 or 2 GUGI to assess for staple line leaks in clinically asymptomatic patients. This would improve patient comfort, decrease healthcare spending, and potentially prevent unnecessary reoperation.

DOES LOCATION MATTER? ANALYSIS OF THE VA YOUTUBE CHANNEL

ABSTRACT #84 REF: 10937523

INTRODUCTION: The Department of Veteran Affairs is a complex health care delivery system. Part of its mission is to connect with its diverse patient populations with local as well as national based programs. Online platforms like YouTube have been used toward this end.

METHODS: The VA YouTube Channel was accessed in November 2017 by two different reviewers. The top viewed 500 videos were examined. Videos were divided into two groups: state affiliated video (State) or non-state affiliated video (National). A fifty-video sampling was used to calculate inter-observed correlation. All videos were examined for: subject matter, duration of video, time since video posting, total views and if additional links were provided. Videos with affiliated states were classified based on fiscal veteran population assessment of 2017 as greater than or less than 310K.

RESULTS:

A total of 471 videos were found, inter-observer correlation was 0.76.

State

(n=174; 42%)National

(n=297; 58%)p value

Duration in minutes 4.1 +/- 2.9 4.1 +/- 2.90.99†

Views 3167 +/- 9444 7427 +/- 19,6610.008†

Days Since Posting 1656 +/- 1075 1119 +/- 9470.24†

Link Provided 50% 80% 0.0001*

†students t-test, *Fisher's Exact test

Of all the subject matter examined: only veteran life (29% vs. 20%; $p = 0.03^*$), weight management (2% vs. 7%; $p = 0.009^*$) and mental health (7% vs. 2%, $p = 0.006^*$) were found to be statistically different between State and National based groups respectively. Of the state based videos the majority, 72%, were from densely population veteran states.

CONCLUSIONS:

In conclusion, State based VA YouTube Channel videos had fewer views and fewer links provided. Subject matter with these videos centered significantly around veteran life and mental health content. These data should inform local and national outreach efforts by VA System.

THE LEARNING CURVE FOR MULTI-PARAMETRIC MRI/US FUSION GUIDED PROSTATE BIOPSY: A SINGLE CENTER EXPERIENCE

ABSTRACT #85 REF: 10933258

Introduction

Multi-parametric MRI (mpMRI) with ultrasound fusion targeted biopsy has been increasingly utilized as a diagnostic procedure for patients suspected of having prostate cancer. Several aspects of fusion biopsy require learning, including lesion targeting and the operational knowledge of the various fusion biopsy devices. Understanding the learning curve of the procedure will be helpful for institutions considering implementation into their practice.

Methods

We retrospectively reviewed 173 mpMRI/US fusion targeted biopsies performed at our institution utilizing the Artemis™ (Eigen) fusion biopsy device. Each biopsy was performed by one of five resident urologists with no prior experience performing fusion targeted biopsy under the supervision of an experienced urologist. An average of five biopsy cores were obtained from each region of interest (ROI), followed by a 12-core systematic biopsy using a software generated template. Operative records were used to document the primary end point of length of procedure (LOP). Analysis of variance and chi-square tests were used to compare continuous and categorical variables respectively. Multiple linear regression was utilized to assess independent predictors of LOP.

Results

Overall, LOP decreased with increasing operator experience. Average LOP for cases 1-10 was 30.36 minutes, (SD 9.3). There was a significant decrease in average LOP with increasing biopsy experience; for cases 10-20, 21-30, 31-40 LOP was 25.1, 21.6, and 18.6 minutes, respectively ($p < 0.01$). There were no significant differences in the number of ROIs detected on mpMRI by our radiologists over time ($p = 0.44$). Lower number of ROIs and increasing biopsy experience were both significant predictors of shorter LOP ($p < 0.01$ for both).

Conclusion

Results of our study demonstrate an improvement in LOP with increasing user experience, independent of number of ROIs. In addition, the number of ROIs were shown to independently influence LOP. Additional longitudinal data may further elucidate variables associated with physician learning curve.

INTERIM ANALYSIS OF A PROSPECTIVE RANDOMIZED, DOUBLE-BLINDED CLINICAL TRIAL TO ASSESS THE IMPACT OF INJECTION PRESSURE ON SPREAD OF LOCAL ANESTHETIC DURING ADDUCTOR CANAL BLOCK AND POSTOPERATIVE REHAB

ABSTRACT #86 REF: 10901375

Background: Adductor canal blocks (ACB) produce medial thigh and anterior knee analgesia while sparing motor function. Injection of different volumes of local anesthetic can produce variable spread. 15 mL of injectate has been shown to span from the femoral triangle to the popliteal fossa in cadavers. 20 mL of radio-opaque injectate has been shown to extend to the popliteal fossa, in close proximity to the sciatic nerve, in live humans. Injection pressure has not been studied during ACB in clinical trials. We hypothesized that, for a fixed injectate volume, injection pressure will affect spread towards the femoral nerve (cranially) and the sciatic nerve in the popliteal fossa (caudally). Spread to these locations could lead to inadvertent blockade of the femoral nerve or sciatic nerve, which has important implications for the use of ACB as a motor-sparing block.

Methods: This is an interim analysis. We enrolled 26 subjects aged 18-65, ASA classes I-III, scheduled for elective anterior cruciate ligament repair with preoperative ACB and general anesthesia. Subjects were randomized to one of 2 groups: high pressure (>20 psi) and low pressure (<15 psi). All patients received an ultrasound-guided ACB with 15 mL of ropivacaine 0.5% at the midpoint of the adductor canal with a digital in-line continuous injection pressure manometer. The extent of local anesthetic spread proximal and distal to the injection site was assessed with ultrasound immediately afterwards. Patients were evaluated postoperatively for achievement of physical therapy milestones using the Lower Extremity Function Scale (LEFS).

Results/Conclusion: High pressure ACB is associated with greater spread within the adductor canal. However, it is not associated with an increased incidence of femoral or sciatic nerve blockade, nor is it associated with decreased achievement of postoperative physical therapy milestones. Conversely, high pressure ACB is associated with greater block success and lower postoperative pain scores.

COMPARISON OF FLOW-VOLUME CHART PARAMETERS BETWEEN CAUCASIAN AND AFRICAN-AMERICAN MEN WITH NOCTURIA

ABSTRACT #87 REF: 10855813

Purpose: Nocturia is a source of significant bother, morbidity, and mortality. The purpose of our study was to identify differences in voiding diary parameters between Caucasian and African-American males to better understand differences in the genesis of nocturia amongst these racial two groups.

Methods: This is a retrospective analysis of flow-volume charts (FVCs) completed by men between 2008-2016 with chief complaint of nocturia. Patients were split into two cohorts- those self-identified as Caucasian and African-American. Patients who did not identify as one of either cohort or did not complete at least one FVC that had an actual number of nocturnal voids (ANV) were excluded. Only the baseline FVC was utilized for patients who completed FVC's at multiple visits. A Wilcoxon signed-rank test was performed to test for significance between groups.

Results: Our study included 118 Caucasian men, and 109 African-American men. The parameters analyzed were age, body weight (kg), 24 hour urine volume, actual number of voids (ANV), hours of sleep, nocturnal urinary volume (NUV), maximum voided volume (MVV), nocturnal maximum voided volume (NMVV), nocturia index (Ni), nocturnal polyuria index (NPi), nocturnal urine production rate (NUP), predicted nightly voids (PNV), nocturnal bladder capacity index (NBCi), and first uninterrupted sleep period. There was no significant difference in any of these parameters when comparing Caucasians to African-Americans.

Conclusions: Our study suggests that race should not inform treatment considerations when managing a patient with nocturia.