Scientific Session V
Date: Tuesday, November 7, 2017
Time: 7:30am - 9:20am
Room Location: Alhambra B

7:30am - 7:50am
19. DAY OF HOSPITAL ADMISSION AND EFFECT ON OUTCOMES; “THE WEEKEND EFFECT” IN PATIENTS WITH ACUTE GALLSTONE PANCREATITIS
University of Arizona
Presenter: Faisal Jehan MD
Invited Discussant: Michael Farnell MD, Rochester, MN
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Background: Recent studies suggest that patients admitted to medical or surgical service on the weekend have worse outcomes compared to those admitted on weekdays. This is known as “The Weekend Effect.” However, little is known whether this weekend effect occurs in patients with acute gallstone pancreatitis as their management requires many resources and collaboration of the surgeon, nursing staff, anesthesia and gastroenterologist. The aim of our study was evaluate outcomes in patients who are admitted on weekend compared to those admitted on weekday for acute gallstone pancreatitis.

Methods: We analyzed the Nationwide Inpatient Sample (NIS) database from 2010-2012. Patients with acute gallstone pancreatitis who underwent ERCP were included in our study and were divided into two groups those who were admitted on the weekend vs. those admitted on weekday. Our primary outcome measures were time to ERCP, adverse events and mortality. Secondary outcome measures were hospital length of stay, and total cost. Regression analysis was performed.

Results: A total of 4503 patients with acute gallstone pancreatitis who underwent ERCP were included in our study of which 22.5% were admitted on weekend while 77.5% were admitted on a weekday. Mean age was 57 ± 19 years and 57.1% were female. Within 24 hours the rate of ERCP was higher in patients admitted on the weekday compared to those admitted on the weekend (40% vs. 24%; p<0.001). Similarly by 48hours, the rate of ERCP was higher in the weekday group (69% vs. 49%, p=0.03). However, there was no difference in the mortality rate (1.7% vs. 1.9%, p=0.75) or adverse events (8.8% vs. 8.4%, p=0.56) between the two groups. The hospital length of stay (6 days vs. 8.4 days, p=0.04) and the total cost of hospitalization ($71,577 vs. $84,982, p=0.03) was lower in the weekday group as compared to the weekend group. On regression analysis, patients admitted on weekday were more likely to undergo ERCP within 48 hours (OR: 1.98, CI 1.3-2.6, p=0.01).

Conclusion: Patients admitted on weekends for acute gallstone pancreatitis experience a delay in getting ERCP with no impact on adverse events and mortality. This leads to a longer hospital stay and increased hospital costs. Service lines with weekend coverage will lead to improved and timely resource utilization and may improve outcomes.
Background: The aim of this study is to investigate patient centered quality of life outcomes in patients undergoing laparoscopic paraesophageal hernia repair at short- and long-term intervals.

Methods: Patients undergoing laparoscopic paraesophageal hernia repair between 2009 – 2016 were offered participation in a prospective quality of life database. Quality of life outcomes were measured using Short Form-36 (SF-36), the Reflux Symptoms Index (RSI), GERD Health Related Quality of Life (HRQL), and dysphagia scores administered pre-operatively and at 3 weeks, 6 months, 1 year, and 2 years post-operatively. Postoperative quality of life outcomes were compared to preoperative baseline scores using paired t-tests. This study was approved by the Institutional Review Board.

Results: A cohort of 146 patients underwent laparoscopic paraesophageal hernia repair and agreed to complete quality of life surveys at multiple time points. Mean age was 68.6 ± 11.3 years and 23.3% of studied subjects were male. The majority of the cohort also underwent laparoscopic fundoplication (94.5%). Mean body mass index was 30.2 ± 5.6 kg/m2 and 52.7% reported no history of smoking while 45.2% and 2.1% are former and current smokers respectively. Hernia type frequency was 4.1% type 2, 80.8% type 3, and 11.6% type 4. The median length of stay following surgery was 48 hours (Q1:24 and Q3:72) and the recurrence rate was 10.8%. Significant improvements between baseline and all postoperative time points were seen in RSI (3 weeks: p<0.0001, 6 months: p=0.005, 1 year: p=0.0004, 2 years: p=0.002) and GERD HRQL (3 weeks: p<0.0001, 6 months: p=0.0019, 1 year: p<0.0001, 2 years: p=0.0003). Dysphagia scores were worse at 3 weeks but not significantly different at 6 months, 1 year or 2 years. In addition to RSI and GERD scores, two years post-operative Physical Functioning (p=0.016), Role Limitations-Physical (p=0.007), Social Functioning (p=0.034), and Pain (p=0.013) scores showed significant improvement.

Conclusion: Laparoscopic paraesophageal hernia repair results in significantly improved quality of life as measured by SF-36 at both short- and long-term intervals. Reflux Symptoms Index and GERD HRQL measure scores improved at all postoperative time points. Additionally, patients reported higher levels of physical and social functioning and lower levels of physical role limitations and pain at two years.
Background: Health care resources utilization continues to rise as the elderly population grows. Geriatric trauma patients represent a particular challenge as their injury patterns differ from those seen in younger adults and the elderly are at risk for significant injury after even minor trauma. As a result, low thresholds for abdominal CT utilization in geriatric patients sustaining blunt trauma are common, potentially increasing the number of unnecessary scans. We hypothesized that plain radiographs of the chest (CXR) and pelvis (PXR) obtained in the trauma bay can safely be used to identify geriatric blunt injured patients at low risk of having clinically significant abdominal injuries, for whom additional imaging with CT scan is unnecessary.

Methods: This was a retrospective analysis using the 2014 National Trauma Data Bank (NTDB). All patients >/= 65 years-old who sustained blunt trauma (falls, ground level fall, motor vehicle and motorcycle crashes, auto versus pedestrian, and assault) were included. CXR was defined as NEGATIVE if none of the following injuries were identified: rib fractures, lung contusions, sternal fractures, diaphragm injuries, and hemo/pneumothorax. PXR were considered NEGATIVE if no pelvic fractures (excluding hip fractures) were identified. Rates of abdominal injuries and need for laparotomies were compared according to plain radiographs findings and stratified by mechanism of injury.

Results: A total of 202,553 elderly blunt trauma patients were available in the dataset and used for the analysis. Mechanism of injury included falls (83%) [83% of which were ground level falls], motor vehicle crash (11%), pedestrian struck by auto (3%), assault (2%), and motorcycle crash (1%). Across the entire population, patients with both NEGATIVE CXR and NEGATIVE PXR were found to have abdominal injuries 1% of the time and 0.3% underwent laparotomy. Patients with injuries found on both CXR and PXR had an associated abdominal injury 27% of the time (p < 0.0001) and 8% underwent laparotomy (p < 0.0001). Similar significant differences were found when patients were stratified by mechanism of injury.

Conclusion: Regardless of specific mechanism, geriatric blunt injured patients with a normal CXR and PXR rarely sustained an abdominal injury or required a laparotomy. Negative CXR and PXR can be used to identify geriatric patients who may not require additional imaging with an abdominal CT scan after blunt trauma.
Background: Categorical general surgery (GenSurg) with its applicant pool and trainees has changed over the past decades. The purpose of this study is to profile contemporary applicants and subsequent matriculants of GenSurg residencies.

Methods: GenSurg applicant and PGY1 trainee data were obtained from ERAS, NRMP, USMLE and AAMC for the years 2013-2016. Students t-test or Chi square were used to determine significant differences (p<0.05). As reference, in 2013, Step 1 scores and pctiles were: 48 pctile= 230, 58 pctile=235, 76 pctile=245, and 85 pctile=250; in 2014, Step 2 scores and pctiles were 46 pctile=240, 57 pctile=245, and 68 pctile=250.

Results: For the first time in 2016, GenSurg was #4 among the top 5 most competitive residencies (behind Ortho, Uro, and Derm) as measured by ave apps/applicant. Cross specialty application in which applicants rank programs in more than one specialty is common. In 2015 GenSurg applicants, applied across specialties to Prelim Surgery (59.9%), CatIntMed (34.4%), FamMed (25.4%) and PreIntMed (24.2%). In surgical specialties, cross specialty apps occurred with: ObGyn (9.2%), PlasInt (6.4%), VasInt (5.7%), and Ortho (5.3%). The success rate for US grads for ranking only GenSurg programs was 92.1% (771/837) compared to CatIntMed (98%), Ortho (80%), NeuroSurg (81%), and ENT (82%). In 2013, there were 2415 applicants (33.9% female, 38.1% White/9.9%AA/32.6%Asian/8.6%Hisp, 3.2%AOA at submission) for 1185 GenSurg spots resulting in 99.6% fill. The subsequent 2014 PGY1 class when parsed among Matched/Unmatched exhibited: Step 1 score (ave)=232/213; Step 2 score=245/226; abstracts/publications/presentation=4.4/2.7; %AOA=4.4/2.7; WorkExp=3.0/3.3, VolunteerExp=6.7/6.5, and %NIH Top 40 school=32.5/15.8. When the 2014 PGY1 GenSurg Match trainees were compared with their Match peers in CatIntMed, PlasInt and NeuroSurg, PlasInt and NeuroSurg trainees had significantly higher Step 1 (245/244) and 2 scores (252/247), abstracts/publications (12.5/11.7), %AOA (39/28), and %NIH Top 40 (46/41); in contrast, CatIntMed was not different from GenSurg. 2015 applicants and subsequent 2016 trainees exhibited statistically “identical” trends, with the exception of higher %AOA for all specialties. On the most recent 2013 survey, applicants ranked the most important factors on a 5-pt scale as: housestaff morale (4.6), quality of faculty (4.5), cultural/racial-ethnic/gender diversity (4.5), AMC (4.4), quality of the program director (4.4) and international experience (4.4).

Conclusion: GenSurg is an increasingly competitive specialty. PGY1 trainees compare well with their CatIntMed peers, but lag behind their PlasInt and NeuroSurg colleagues. Board scores, research productivity (not experiences) in the form of abstracts, presentations and publications, AOA status and NIH top 40 schools distinguish Match from Unmatch applicants. In contrast, work and volunteer experiences are not different. GenSurg remains a desirable and competitive field that is matching capable applicants.
Background: Effective management of stage IV melanoma patients remains a challenge. In spite of promising emerging therapies, many patients develop resistance and disease progression. Our group and others have demonstrated that circulating melanoma cells (CMCs) can be detected in a significant number of advanced melanoma patients; however, the prognostic significance of CMCs has not yet been established. The aim of this study was to determine if CMCs are associated with worse relapse-free survival in stage IV melanoma patients.

Methods: A baseline CMC assessment (7.5mL blood) was performed in 67 stage IV cutaneous melanoma patients using the CellSearch® system (Janssen) at the time of Stage IV diagnosis. CD146+ cells were immunomagnetically enriched; CD146+, HMW-MAA+, CD45-, and CD34- nucleated cells were considered CMCs. The presence of ≥ 1 CMC meeting morphological criteria for malignancy was considered a positive result. Data on recurrence was collected by data collectors blinded to CMC assessment results. Log-rank test and Cox regression analysis were applied to establish the association of CTCs with relapse-free survival.

Results: Median follow-up was 14 months, and mean age was 53 years. One or more CMC was detected in 28/67 (42%) of patients at baseline blood draw. The presence of CMCs was not associated with primary melanoma features such as Breslow thickness, BRAF status, the presence of mitotic figures, or ulceration (p=NS). During the follow-up period, 42/67 (63%) patients recurred, with 23/28 (82%) of the CMC positive patients relapsing, vs 19/39 (49%) of the CMC negative patients (log rank p=0.0004; hazard ratio 2.89, 95% CI 1.57 – 5.33, P=0.0007). CMC presence at baseline blood draw also predicted relapse within 6 months, as 13/28 (46%) of CMC positive patients relapsed vs. 5/39 (13%) of CMC negative patients (log rank p=0.0005; hazard ratio 5.25, 95% CI 1.86 – 14.77, P=0.0007).

Conclusion: CMCs were associated with relapse in stage IV melanoma patients. This information warrants further study of CMCs as a means of identifying patients at high-risk for disease progression.