METHODS AND MATERIALS: All adult patients who underwent surgery at our hand center between January 1, 2018 and August 31, 2019 and consented to data use for research were included. The patients’ medical record numbers were used to identify ED visits anywhere in our health system within 90 days of surgery. Presenting diagnosis was used to identify patients with surgery-related complaints. Preoperative and postoperative questionnaires, including the brief Michigan Hand Questionnaire (bMHQ), the Patient-Reported Outcome Measuring Information System (PROMIS) Upper Extremity (UE) and Pain Interference (PI), pain scores, and postoperative satisfaction scores from the first postoperative visit were collected prospectively. Satisfaction and pain were scored from 0 to 10; 10 is highest satisfaction and highest pain score.

RESULTS: Our cohort included 2,056 patients, with 1,033 (50.2%) females and 1,023 (49.8%) males. Sixty-one (3.0%) presented to the ED with hand-related or surgery-related complaints within 90 days after surgery. Preoperative pain scores were higher in the group that presented to the ED compared to those that did not (7 versus 4; \( P < 0.001 \)), and for every unit increase in preoperative pain, patients were 1.2 times more likely to return to the ED within the global period (\( P < 0.001 \)) after surgery. Patients who presented to the ED also had preoperative bMHQ scores 14.6 points lower (\( P < 0.001 \)) and preoperative PROMIS PI scores 5.2 points higher than their counterparts (\( P = 0.005 \)). Postoperative satisfaction scores were significantly lower in patients who subsequently presented to the ED (8.1 versus 9.1; \( P < 0.001 \)), whereas other postoperative questionnaire scores were not found to significantly predict likelihood of an ED visit.

CONCLUSIONS: Patients who presented to the ED within the global period had significantly higher preoperative pain scores, significantly worse preoperative bMHQ and PROMIS PI scores, and significantly lower postoperative satisfaction scores. These patient-reported scores were associated with an increased likelihood of presenting to the ED for management of a hand or postoperative issue during the global period. These patients should be identified early and counseled on their healthcare options in order to improve value-based care and decrease healthcare utilization.

Does the Location of Initial Management After Distal Radius Fracture Impact the Ultimate Need for Operative Intervention?

Presenter: Nicholas J. Albano, MD

Co-Authors: Kevin Beine, BS; Armin Edalatpour, MD; Brett Michelotti, MD

Affiliation: University of Wisconsin Hospital and Clinics, Division of Plastic Surgery, Madison, WI

BACKGROUND: Fractures of the radius and/or ulna comprise the largest proportion (44%) of the estimated 1.5 million cases of hand and forearm fractures seen in United States emergency departments each year. Displaced distal radius fractures (DRFs) are often managed with closed reduction and splinting. After initial management of these injuries, patients are referred to tertiary care facilities or specialty groups for continuing care. Failure to obtain a stable, near-anatomic reduction may lead a specialist to recommend and/or perform surgery to re-establish appropriate radiographic relationships. Complication rates associated with nonoperative management have been studied though data on conversion to surgical management are not widely reported. Surgery incurs a significant financial and physical cost to the patient and healthcare system. The primary aim of this study was to assess how location and type of facility at which a DRF is initially managed impacts rates of surgical intervention. Specifically, we compared a tertiary care facility, staffed with hand specialists, to referring community institutions where no hand specialists were readily available.

METHODS: We performed a retrospective chart review of all patients treated at University of Wisconsin—Hospital and Clinics (UW) for DRFs from January 1, 2018 to December 31, 2018. Patients were placed into one of 2 groups: (1) initial treatment performed at any location within the UW system and (2) initial treatment performed at any location outside of the UW system. We calculated the operative rate for each group. We also analyzed the effect of sex and type of injury on the conversion to surgical management.

RESULTS: We identified 1,337 patient encounters associated with a DRF current procedural terminology (CPT) code. Eight hundred twenty-four patients were initially managed at UW Health, whereas 513 patients were initially managed at non-UW facilities. Patients initially managed at UW went on to surgical intervention at a significantly lower rate of 15.0% (\( n = 124 \)) compared to those patients initially treated outside of UW Health who underwent surgery 26.3% of the time (\( n = 135 \); \( P < 0.001 \)). Type of injury was not a predictor of conversion to surgery nor initial presentation to UW. Sex was not a predictor of surgical conversion.

CONCLUSIONS: These data suggest that initial management of DRFs at UW Hospital and Clinics significantly decreases the rate of operative reduction and fixation. A decrease in operative intervention reduces both the physical and financial impact of DRFs. This indicates that there may be a need to
educate community providers to either perform an acceptable bony reduction or refer patients to treating facilities capable of performing these techniques in the early postinjury period.

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Utility of Routine Pathologic Specimens in Ganglion Wrist Excisions

Presenter: Darren B. LePere, MD
Co-Authors: Rebecca S. Bickham, MD; John M. Ingraham, MD
Affiliation: Penn State Hershey Medical Center, Hershey, PA

INTRODUCTION: As healthcare costs continue to rise, increased emphasis has been placed on cost-benefit optimization. One area of investigation has been the utility of pathologic examination of specimens from routine procedures with low preoperative suspicion for malignant pathology. Previous literature has challenged the established pathology guidelines in other surgical subspecialties, but no studies have been conducted on the value of routine pathology within hand surgery. The goal of this study was to assess the utility and cost of routine pathologic analysis for one of the most commonly performed procedures in hand surgery, ganglion cyst excision.

METHODS: A retrospective cohort study was performed following institutional review board approval. Billing records were searched for CPT code 25111-25112 (Ganglion Cyst Excision) over a 5-year period. All identified records were then searched for associated pathology billing codes, preoperative diagnoses, and postprocedural diagnoses. Pathology reports were then reviewed for final surgical diagnoses. Lastly, associated pathology charges were obtained from our institutions billing department.

RESULTS: A total of 407 patients underwent ganglion cyst excision at our institution between 2015 and 2019 by 7 different fellowship-trained hand surgeons. Of those patients, 318 (78.1%) had specimens sent for pathologic review. Thirty-two of those patients (10.1%) had nonganglion cyst diagnoses preoperatively. All 32 charts were reviewed and 31 of the 32 patients had high suspicion for “ganglion cyst” preoperatively with confirmation of diagnosis after intraoperative findings. One patient had abnormal pathology (0.3% of specimens), which was diagnosed preoperatively as a “cystic vascular malformation” on preoperative imaging. All reviewed specimens were associated with a “Level 3 Surgical Pathology” and “Tissue Exam Level 3” billing code, which corresponded to a billing charge of $258.

CONCLUSION: Current national guidelines for pathologic review of intraoperative specimens are the result of recommendations proposed in 1996 by the College of American Pathologists and do not take into consideration the surgeon’s clinical acumen. Of the 407 patients who underwent excision of a ganglion cyst, 78 percent had specimens sent for pathology, with only 1 nonganglion diagnosis (0.3%) following pathology evaluation. The 1 nonganglion diagnosis identified was suspected to be “nonganglion” pathology on preoperative evaluation. Over the past 5 years, $81,786 was spent at our institution to confirm a benign pathologic finding that was correctly diagnosed by the physician preoperatively/intraoperatively. These findings would suggest that routine pathology specimens are not indicated in cases where surgeons have a high clinical suspicion for ganglion cyst, and pathologic review should be reserved for cases with atypical findings.

Pulley Release and Reconstruction With Acellular Dermal Matrix After Zone 2 Flexor Tendon Injury

Presenter: David E. Kurlander, MD
Co-Authors: Marco A. Swanson, MD; Leigh-Anne Tu, MD; Anand R. Kumar, MD; Tobias C. Long, MD; Kyle D. Lineberry, MD; Joseph Khouri, MD
Affiliation: Case Western Reserve University, Cleveland, OH

PURPOSE: Flexor tendon injuries in zone 2, commonly referred to as “no man’s land”, have high incidence of postoperative stiffness. Historically, it was thought that release or venting of the A2 or A4 pulley would lead to bowstringing and weakness. Building upon the success of acellular dermal matrix (ADM) to maintain strength and avoid