

KIOSK #1

1-12

CERISE

FEBRUARY 19-21

STCAM

2026

south texas chapter annual meeting
The Westin Houston Medical Center

South Texas *Chapter*
ACS Chapters American College
of Surgeons



ePoster #1 | Abstract | Clinical Science | Endocrine

Implementation of a standardized post-operative hypocalcemia protocol

Mohamad Abouelnaaj, MD, Svetlana Gannutina, MD, Avni Mody, MD, Pratima Kumar, MD, Samuel Long, MD

University of Texas Austin - Dell Medical School

Background: Patients undergoing total thyroidectomy or parathyroidectomy are at risk of developing post-operative hypocalcemia. Prevention of this complication involves calcium and calcitriol supplementation post-operatively, but a standardized guideline for this management does not currently exist.

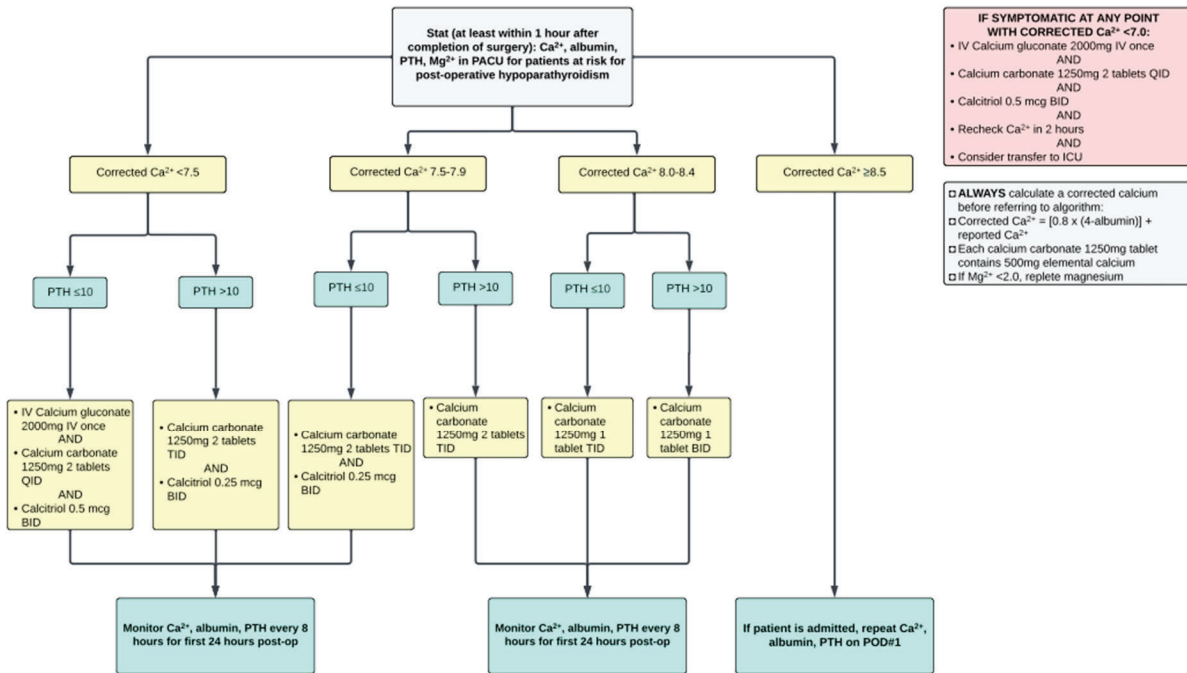
Objective: The protocol (Figure 1) was developed by a multidisciplinary collaboration involving an endocrine surgeon and endocrinologists at Dell Seton Medical Center (DSMC) and Seton Medical Center Austin (SMCA). We hypothesize that the incidence and severity of hypocalcemia post-operatively will be reduced because of initial and adequate supplementation. Outcomes are decreased overall hospital length of stay, 30-day readmission rates and symptomatic post-operative hypocalcemia.

Methods: Surgical cases involving either one of two surgeons at the previously described sites were reviewed by two physicians. 238 cases were reviewed from January 1, 2022 to January 1, 2025 as a part of our retrospective chart review. 165 met our inclusion criteria (i.e. total thyroidectomy, completion lobectomy or parathyroidectomy). Our prospective cohort is ongoing (began on January 1, 2025).

Results: Of the 165 cases reviewed in the retrospective part of this study, 3 cases were complicated by readmission within 30 days for hypocalcemia, 11 cases developed post-operative hypocalcemia, and the average length of stay was 1.4 days.

Conclusion: Our results thus far highlight an opportunity to improve outcomes in patients undergoing a total thyroidectomy or parathyroidectomy. Post-operative complications and length of stay in the three years prior to implementation of our protocol will be compared to those in the year after our protocol's implementation once data collection is completed.

Post-operative Hypocalcemia Algorithm
To be followed immediately after total thyroidectomy or parathyroidectomy



ePoster #2 | Abstract | Clinical Science | Abdominal/Laparoscopy

A Structured Video-Based Data Dictionary Enables Objective Assessment of Surgical Performance in Cholecystectomy

B Blair, C Miller, EG Matthews, J Williams-Roberts, A Hari, E Canfield, D Lew, J Stulberg
University of Texas HSC - Houston

Background: Professional sports routinely use video analytics and event tagging to quantify performance, identify variability, and guide training. Surgical video lacks standardized methods to convert intraoperative activity into objective data. Without a defined structure for categorizing events and timing, opportunities for benchmarking, feedback, and technical skill development remain limited.

Objective: Develop a structured data dictionary for robotic cholecystectomy that enables operative video to be translated into standardized performance variables.

Methods: A procedure-specific framework was created to define and organize intraoperative activity into four domains: (1) Operative Phases (Retraction, Lysis of Adhesions, Cystic Triangle Dissection, Clipping, Liver Bed Dissection, and Extraction); (2) Operative Difficulty (Case-specific challenges e.g. large liver, distended gallbladder, aberrant anatomy); (3) Fixed Events (E.g. Achieving the Critical View of Safety); (4) Variable Events (Bleed Events e.g. bleeding episodes and interventions, Instrumentation Events e.g. instrument entries, exits, exchanges, and dwell times). Each domain was paired with consistent definitions for start/stop points, timing, frequency, and relational context to support temporal and comparative analysis.

Results: The data dictionary establishes a reproducible structure for categorizing operative video into measurable units of performance. Its modular design enables phase-level mapping, event clustering, and cross-case comparison without reliance on subjective interpretation. The framework supports the extraction of time-based metrics, frequency trends, and performance variability across cases and providers.

Conclusion: A structured data dictionary for cholecystectomy provides the foundation for transforming surgical video into analyzable performance data. By defining phases and events with precision, it creates a pathway for benchmarking, feedback, trainee assessment, and integration into educational and quality improvement initiatives.

ePoster #3 | Abstract | Clinical Science | Abdominal/Laparoscopy

Predictors of Failure During Nonoperative Management of Simple Acute Appendicitis

S Jayakumar, M Joe, L DeSplinter, D Nguyen, J Stulberg, D Ferguson

University of Texas HSC - Houston

Background: Nonoperative management (NOM) of acute appendicitis is an acceptable alternative to appendectomy; however, some patients ultimately require surgery. At our center, most patients elect for appendectomy, and we have noted a high failure rate of NOM.

Objective: We aimed to identify factors contributing to failure of NOM of simple acute appendicitis at our center.

Methods: We conducted a single-center retrospective case series using data from an institutional appendicitis database (January 2023 – May 2025). Adults diagnosed with simple acute appendicitis who underwent initial NOM with eventual surgery were included. Patients were categorized by early versus late failure of NOM, defined as transitioning to appendectomy during the index admission versus a subsequent admission. Reasons for failure included: clinical failure (failure to improve/clinical deterioration), change in patient preferences, recurrent appendicitis, or other. Descriptive statistics were performed.

Results: Early failure patients (n=5, median age 22 years [IQR 22, 40]) were younger than late failure patients (n=14, median age 44 years [IQR 31, 52]). Early failure patients underwent surgery due to clinical failure (40%), patient preferences (40%), or other reasons (20%), and the median time from admission to surgery was 37 hours (IQR 29, 45). All early failures underwent laparoscopic appendectomy with no intraoperative complications. With late failure patients, pathology indicated underlying chronic appendicitis in 21% and simple acute appendicitis in 79% of patients.

Conclusion: Among early failure patients, patient preferences led to the change in management as frequently as clinical failure, underscoring the importance of shared decision-making in the management of acute appendicitis.

ePoster #4 | Case Report | Clinical Science | Endocrine

Giant by Nature, Shocking by Function: A Massive Pheochromocytoma Case

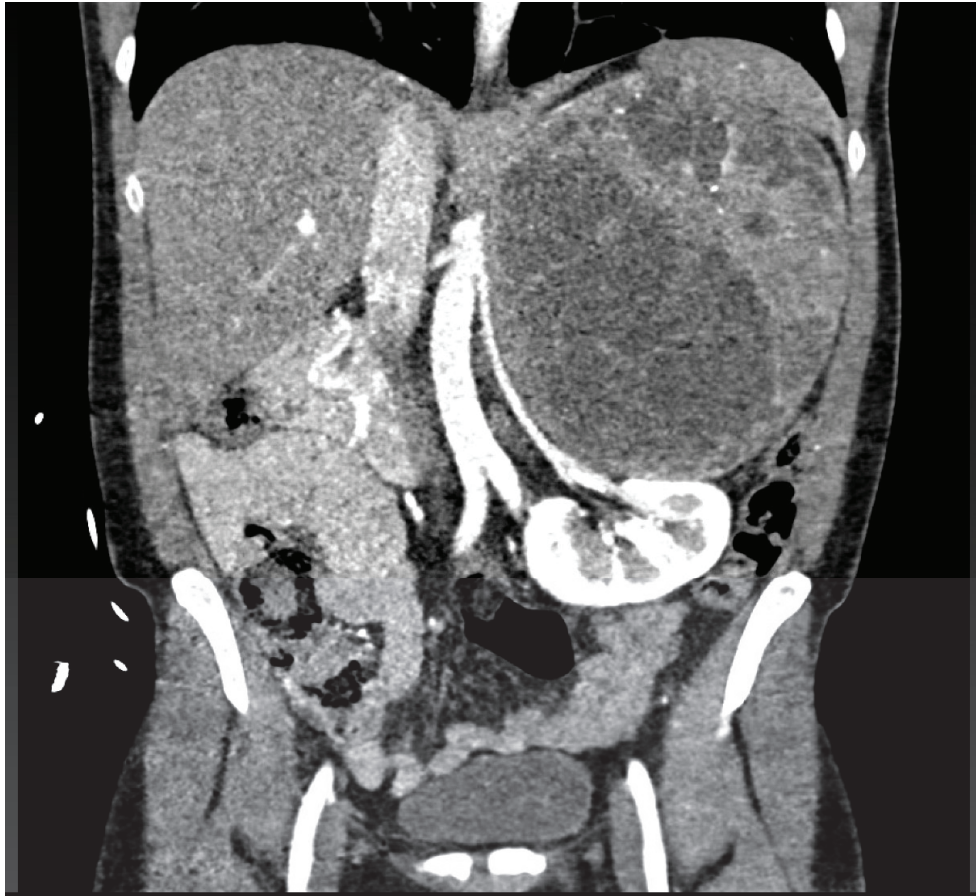
J Martinez-Paredes, A Vargas, V Phan, L Pert, B Gagen, M Angel, T Jie, H Chen, S Milan
Baylor Scott & White Health

Introduction/Objective: Pheochromocytomas are catecholamine-secreting neoplasms that arise from chromaffin cells in the adrenal medulla. Incidence is described to be 0.46 per 100,000 person-years. This rare entity can be fatal due to cardiovascular complications. Giant pheochromocytomas by definition are tumors > 7 cm in size.

Case Presentation: We present a case of a 46-year-old male with history of recent NSTEMI. A left heart catheterization revealed an EF 30%, global hypokinesis but no coronary artery disease. During this cardiac workup, an incidental large left suprarenal complex cystic mass was identified on imaging (18x14x17cm). Prior to our evaluation, an IR biopsy of the mass performed at an outside facility caused an unplanned ICU admission and was negative for malignancy. Biochemical testing at our institution confirmed a diagnosis of left-sided pheochromocytoma (plasma epinephrine: 873 pmol/L). After preoperative alpha-adrenergic blockade, surgical en-bloc resection of the mass (18.3 cm) was performed. He required postoperative care in the STICU and was discharged home on postoperative day seven. Final pathology confirmed pheochromocytoma with a PASS score of 7. Postoperatively, the patient developed a chyle leak that resolved with conservative management.

Discussion: Current guidelines emphasize the importance of a thorough biochemical evaluation for adrenal masses and advice against biopsy. Biopsy of an undiagnosed pheochromocytoma can lead to serious cardiac complications if this condition is untreated.

Conclusion: To our knowledge, only 22 cases of giant pheochromocytomas (>18 cm), including the present case, have been reported in the literature. Optimal outcomes rely on appropriate preoperative alpha-adrenergic blockade followed by surgical resection.



ePoster #5 | Case Report | Clinical Science | Abdominal/Laparoscopy

Abdominal Wall Transection: A Case Report and Repair Technique with Mesh Suture in a Contaminated Field

C Miller, M Zhao, M McGill, J Stulberg
University of Texas HSC - Houston

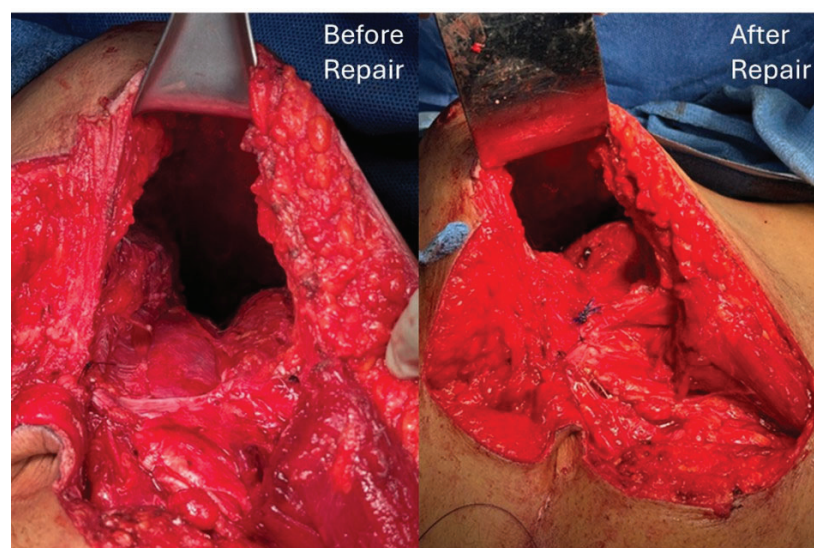
Introduction/Objective: We present a complete transection of the abdominal wall musculature with concomitant bowel injury requiring resection after blunt trauma. We resected bowel and then rebuilt the abdominal wall in layers demonstrating the successful use of a novel technique in a challenging situation.

Case Presentation: A 24-year-old male presented to a Level III trauma center after motor vehicle collision. Pertinent findings included transabdominal seatbelt sign and hemoperitoneum on CT scan, tachycardia and normotension. The patient was taken emergently to the operating room where injured segments of jejunum and sigmoid colon were resected and re-anastomosed.

We noted complete transection of the left abdominal wall musculature including transversus abdominis, internal and external oblique, and bilateral rectus muscles. Three myofascial advancement flaps were used to reapproximate all lateral layers using #1 Duramesh in a running fashion from the lateral boarder of psoas to the semilunar line. Rectus abdominis muscles were closed cranio-caudally. The midline was then closed. The patient was discharged on POD#5 and was seen in clinic post-op and has maintained function. We plan to obtain a CT scan to evaluate for hernia recurrence prior to the meeting.

Discussion: Traumatic abdominal wall hernias are rare and difficult surgical problems especially with concomitant bowel injuries. Mesh suture is a new tool with success in dirty-infected fields.

Conclusion: A layered repair with Duramesh suture following abdominal wall transection at the time of bowel resection successfully restored function in this patient and presents potentially a new paradigm for traumatic hernias.



Robotic SADI-S Revision with Proximalization of DI Anastomosis to Increase Nutrient and Vitamin Absorption and Correct Metabolic Acidosis

J Park, J Zubillaga, A Thapa, P Vega, A Goyal, M Koutentakis, T Sheets, R Oviedo
Sam Houston State University College of Osteopathic Medicine

Background: Single Anastomosis Duodeno-Ileal Bypass with Sleeve Gastrectomy (SADI-S) can lead to severe nutritional deficiencies and metabolic acidosis in some patients, even with a 300-cm efferent limb. Revision surgery with proximalization of the duodeno-ileal (DI) anastomosis, combined with the triple use of indocyanine green (ICG)—for identification of biliary anatomy, assessment of DI perfusion, and intraoperative leak testing—offers potential benefits to mitigate these complications without compromising bariatric efficacy.

Objective: To describe the feasibility, safety, and clinical outcomes of robotic revision of Single Anastomosis Duodeno-Ileal Bypass with SADI-S through proximalization of the duodeno-ileal anastomosis, utilizing triple ICG guidance to correct severe malnutrition, vitamin deficiencies, and metabolic acidosis while preserving weight loss efficacy.

Methods: We present a case of a patient who underwent robotic revision of SADI-S for severe malnutrition, refractory vitamin deficiencies, and metabolic acidosis. The patient initially presented with significant protein-energy malnutrition, multiple micronutrient deficiencies, and metabolic acidosis following primary SADI-S with a 300 cm efferent limb. The revision technique involved robotic resection of the DI anastomosis and proximal construction of a new DI extending the efferent limb length to approximately 450 cm from 300 cm to optimize nutrient absorption.

Results: The patient demonstrated significant improvement in nutritional parameters post-revision. Serum albumin normalized, vitamin deficiencies resolved, and metabolic acidosis corrected completely with normalization of acid-base parameters. Weight loss efficacy was maintained without weight regain. The procedure was completed without complications, and the patient had an uncomplicated recovery with a short hospital stay.

Conclusion: Robotic proximalization of the DI anastomosis is a safe and effective revisional approach for managing severe malabsorption following SADI-S. This technique successfully corrects nutritional deficiencies and metabolic complications while preserving the benefits of weight loss. The robotic approach combined with the triple use of ICG facilitates precise anastomotic revision with excellent outcomes and minimal morbidity.

ePoster #7 | Case Report | Education | Endocrine

The End of the Algorithm: Total Thyroidectomy for Medically Refractory Graves Hyperthyroidism during Pregnancy

L Pert, A Vargas, J Martinez-Paredes, B Gagen, S Milan
Baylor Scott & White Health

Introduction/Objective: Graves hyperthyroidism is defined by decreased levels of thyroid stimulating hormone (TSH), elevated T4 and identification of Thyrotropin Receptor Antibody (TRAb.) Higher TRAb levels in the second half of pregnancy may induce fetal hyperthyroidism, pre-eclampsia, or miscarriage.

Case Presentation: 22-year-old female presented to primary care physician for 25-pound weight loss, nausea, fatigue, and hair loss. She was diagnosed with hyperthyroidism, specifically concerned for Graves with Thyrotropin Receptor Antibody (TRAb) of 18.4 (<1.75 IU/L) and Thyroid Stimulating Immunoglobulin of >40 (<0.54 IU/L.) Patient became pregnant one month later with continued evidence of uncontrolled hyperthyroidism. Additionally, she was noted to have leukopenia, thus thioamides were avoided. She underwent successful total thyroidectomy and is progressing well with pregnancy thus far on thyroid replacement.

Discussion: Women with difficult to medically manage Graves hyperthyroidism on high doses of thioamides should consider definitive therapy prior to conception. Surgical intervention for medical refractory hyperthyroidism remains a safe treatment option, optimally during second trimester; however, strict follow up is paramount to ensure that post operative hypothyroidism is avoided and TRAb levels have decreased.

Conclusion: During pregnancy, with the increase in estrogen production, there is a subsequent increase in thyroid binding globulin (TBG), total T3 and T4 leading to transient drop in TSH levels. When encountering a pregnant patient with Graves hyperthyroidism, it is imperative to have a multidisciplinary team for evaluation of thyroid function tests at frequent, regular intervals to ensure euthyroid state of mother and fetus during the pregnancy and in post-partum care.

ePoster #8 | Case Report | Clinical Science | Endocrine

Reoperative Parathyroid Surgery: The Utility of Selective Venous Sampling in Complex Cases with Bilateral Nerve Injury

R Seniors III, K Holden, S Martinez Ugarte, Alexander Shestopalov, T Vaghaiwalla, J Buicko Lopez

University of Texas HSC - Houston

Introduction/Objective: Parathyroidectomy is the definitive treatment for primary hyperparathyroidism (pHPT), but reoperative surgery carries increased morbidity due to scarring and distorted anatomy. Parathyroid venous sampling (PVS) may aid localization when standard imaging is inconclusive, particularly in patients with prior nerve dysfunction.

Case Presentation: A 73-year-old male with persistent pHPT underwent prior bilateral neck exploration at an outside institution with removal of a normocellular right lower parathyroid gland. Postoperative parathyroid hormone (PTH) levels remained elevated. Six months later, calcium was 12.2 mg/dL with recurrent nephrolithiasis requiring hospitalization. Repeat ultrasound, sestamibi, and 4D CT were non-localizing. Preoperative laryngoscopy revealed bilateral vocal fold hypomobility, right greater than left, despite no hoarseness or aspiration. Given inconclusive imaging and high operative risk, PVS was obtained and demonstrated a ≥ 2 -fold PTH gradient on the right between the middle thyroid and lower internal jugular veins, corresponding to the prior excision site. Reoperative exploration was limited to the right side. Intraoperative neuromonitoring enabled safe dissection through scarred planes, and an ectopic hypercellular right superior parathyroid gland was excised. Intraoperative PTH decreased from 63.6 pg/mL to 14.1 pg/mL.

Discussion: This case illustrates the challenges of reoperative parathyroid surgery, where distorted anatomy and inconclusive imaging increase the risk of nerve injury and persistent disease. PVS provided biochemical localization, guiding a focused, nerve-sparing approach. Preoperative laryngoscopy identified subclinical dysfunction that informed operative strategy.

Conclusion: When conventional imaging fails, PVS can offer decisive localization, enabling targeted exploration, reducing operative morbidity, and improving the likelihood of durable cure.

ePoster #9 | Abstract | Basic/Transactional Science | Abdominal/Laparoscopy
Systematic Analysis of Differences in Laparoscopic Lens Occlusion Perception

M Srinivasan, S Palanikumar, R Virani, C Idelson, J Dhingra, A Ahmed, J Uecker
Texas A&M School of Medicine (EnMed)

Background: Suboptimal visualization in laparoscopic surgery caused by lens debris affects 31–53% of operative time. While technical variability has been quantified using the Objective Structured Assessment of Technical Skills (OSATS) and the Global Evaluative Assessment of Robotic Skills (GEARS), the cognitive factors guiding surgeons' decisions about when visualization requires lens cleaning remain unexplored.

Objective: This study quantified how surgeons, medical students, and the public perceive laparoscopic image clarity to inform surgical education and standardize visualization practices.

Methods: A web-based image scoring tool segmented laparoscopic images into 3×3 tiles. Participants selected tiles with 100% clear visualization. Clarity Score (CS) represented the percentage of responses classifying each tile as clear; Occlusion Score (OS) represented the percentage not classified as clear ($CS + OS = 1$). Tile-level scores were averaged across respondents, then aggregated across nine tiles to generate image-level scores. Twelve images from general surgery, thoracic surgery, and OB/GYN were analyzed. Group comparisons used Kruskal–Wallis and Dunn's post-hoc tests.

Results: Among 278 responses (95 surgeons, 88 students, 95 public), medical students rated images clearer than the public ($p = 0.01$) and surgeons ($p < 0.01$). Surgeons showed heightened sensitivity to clarity in central and corner regions. Surgeons and the public showed similar overall sensitivity, though optical aberrations or viewing conditions may have influenced these trends.

Conclusion: While surgical experience likely influences perception, high variability in assessing image clarity highlights a subjective element in current practices, emphasizing the potential for standardized, quantifiable methods to support objective and data-focused guidelines in the surgical visual sphere.



Figure 1. (Top) Occlusion heat maps showing response patterns for each image by group and by speciality. Average OS included in each tile; darker regions have higher OS values. (Bottom) Table assesses OS spatial scores between Corner Tiles, Center Tiles, and all Remaining tiles for images, separated by group

ePoster #10 | Case Report | Clinical Science | Endocrine

When Imaging Fails, Veins Tell the Truth: A Re-operative Parathyroidectomy Success Story

A Vargas, M Angel, D McDonald, S Milan
Baylor Scott & White Health

Introduction/Objective: Re-operative parathyroid surgery remains a challenging procedure, even for experienced surgeons. Accurate preoperative localization of the culprit gland is critical to achieving a successful outcome.

Case Presentation: A 68-year-old female with recurrent primary hyperparathyroidism and multiple prior neck surgeries presented with persistent hyperparathyroidism. Her surgical history included left parathyroid adenoma excision (2015), right inferior parathyroidectomy with thymectomy (2017), and a third exploration with left thyroidectomy complicated by left RLN injury and vocal cord paralysis (2018). She also had a history of nephrolithiasis and a recent right distal condylar fracture with failed ORIF requiring revision. Labs showed calcium 9.1 mg/dL, PTH 178 pg/mL, and normal vitamin D. 4DCT was non-localizing; venous sampling lateralized to the right upper neck. A fourth surgery was performed; a right superior parathyroid adenoma was identified and excised, confirmed by an intraoperative PTH drop. Parathyroid autotransplantation was also performed.

Discussion: In recent years, parathyroid venous sampling has emerged as a valuable diagnostic tool available at select centers. It offers a key advantage in cases where noninvasive imaging fails, by delineating regions of elevated PTH secretion and aiding in the localization of hyperfunctioning parathyroid tissue.

Conclusion: Parathyroid venous sampling is a valuable adjunct in complex re-operative parathyroid cases, particularly when prior imaging is inconclusive. A thorough understanding of previous surgical interventions and any associated nerve injuries is essential to planning and executing a successful reoperation.

ePoster #12 | Abstract | Clinical Science | Education

Evolving Ergonomics: Musculoskeletal Complaints Begin During Surgical Training, Continue into Practice

R Wu, P Munnangi, P Ganguly, V Dang, C Lannon, N Tapia
Houston Methodist Hospital

Background: Musculoskeletal injuries (MSKI) are prevalent across all surgical specialties. Previous studies focusing on surgical ergonomics investigated MSKI based on surgical specialty, procedure, and surgeon demographics. However, there is limited data evaluating the significance of career stage on surgery-related MSKI.

Objective: This study aimed to localize surgery-related MSKI based on career status.

Methods: A questionnaire was distributed to trainees and attendings across five surgical subspecialties. Data included surgeon demographics, practice characteristics, training or career stage, instrument experience, and presence/frequency of localized symptoms.

Results: Of the 21 surgical trainees and 11 attendings who completed the questionnaire, all attendings reported pain and stiffness. 95.2% of trainees reported pain, and 85.7% reported stiffness. Of reported pain, location in the neck was most common, with 45.5% of attendings and 61.9% of trainees affected ($p=0.465$). Neck stiffness was reported by 63.6% of attendings and 42.9% of trainees ($p=0.458$). Numbness, localized to the fingers and arms, was significantly increased in attendings (36.4%), compared to trainees (4.8%) ($p=0.037$). Despite 96.9% of surgeons attempting exercises and stretching, 75% still experienced persistent symptoms.

Conclusion: The findings show that surgeon participants experienced musculoskeletal discomfort regardless of training level. Neck pain was more prevalent in residents, while neck stiffness was more common in attendings. Limitations include a small number of respondents, limiting the power and significance of the study. However, these preliminary results demonstrate the need for further research on ergonomics during surgical training and practice.