

Scientific Abstracts

Nonsurgical Transurethral Radiofrequency Collagen Denaturation: Results at Three Years Posttreatment Damian Paul Alagia III, MD, FACS, FACOG

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Objective: To prospectively assess treatment efficacy and quality of life in women with stress urinary incontinence 3 years after treatment with nonsurgical transurethral radiofrequency collagen denaturation.

Methods: This prospective study included 139 women with stress urinary incontinence due to bladder outlet hypermobility. Radiofrequency collagen denaturation was performed using local anesthesia in an office setting. Assessments included Incontinence Quality of Life (I-QOL) and Urogenital Distress Inventory (UDI-6) instruments.

Results: In total, 139 women were enrolled and 136 women were treated (mean age, 47 years). At 36 months, intent-to-treat analysis (n=139) revealed significant improvements in quality of life. Mean I-QOL score improved 17 points from baseline (P=.0004) while mean UDI-6 score improved (decreased) 19 points (P=.0005).

Conclusions: Transurethral collagen denaturation is a low-risk, office based procedure that results in durable quality-of-life improvements in a significant proportion of women for as long as 3 years.

Choledochal Cyst in Infants and Children Domingo T. Alvear, MD, FACS, FICS

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Choledochal cysts are one of the more common bile duct anomalies in children and occur approximately in 1 to 10,000 live births. The cause of choledochal cysts remains uncertain but several theories have been proposed.

Choledochal cysts present with jaundice, right upper quadrant pain, and a palpable mass in 30% of cases. The pain is usually the predominant symptom. Serum amylase and lipase levels may be elevated in children presenting with acute abdominal pain. Abdominal ultrasonography or C.T. Scan are the imaging tests of choice for making the diagnosis of choledochal cyst. In the presence of acute pain, jaundice, elevated liver enzymes, and elevated serum amylase and lipase can be seen. Prenatal diagnosis of choledochal cyst is now possible and can be reevaluated in more detail after birth.

In this paper, I will be presenting my experience in the treatment of choledochal cysts in the past 25 years in my practice and during surgical missions. Surgical treatment is the resection of the choledochal cyst followed by ROUX-en-Y choledochojejunostomy. Resection of the choledochal cyst is imperative to prevent the development of cancer in the future.

Surgical Mission Surprises - How To Manage Them Out of Our "Comfort Zone"

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When participating in a surgical mission in Third World Countries, we find ourselves performing surgery in less than ideal conditions. Preoperative studies to help plan the surgical procedure are not available or inadequate. Technology that may facilitate the procedure, that we are accustomed to, is not available. Equipment and supplies for the procedure may be lacking. Conditions in the operating room such as limited space, poor lighting, inflexible OR table, poor electrical outlets, etc. may prevail. In this paper, I will present 4 cases for discussion.

1. 1 year old Honduran girl with rectal exstrophy.
2. 2 year old Honduran boy with cystic abdominal mass.
3. 7 year old Filipina girl with a severe rectal injury after she fell from a tree.
4. 5 year old Filipino boy with massive Megacolon due to rectal stenosis.

This will be an interactive presentation.

Soft Tissue Sarcoma at a Dialysis Access Site in a Transplant Recipient

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Purpose: Soft tissue sarcomas (STS) typically present as soft painless masses on an extremity. We present a patient who was found to have a metastatic STS in his dialysis access site. This association with dialysis access has not been previously documented.

Methods: A case report.

Results: A 62-year-old male presented with a left upper extremity non-healing wound after excision of an pseudoaneurysmal arteriovenous fistula. The patient had received a second kidney transplant which was functioning well. Immunosuppression included Prograf, Cellcept and Prednisone. He had been induced with Thymoglobulin. A biopsy was performed and returned as high-grade pleomorphic sarcoma. An MRI of his left upper extremity showed an 11 x 5.5 x3 cm mass abutting the biceps and brachialis muscles. Also discovered were several lesions in the axilla and the left neck suspicious for metastasis. PET/CT scan confirmed a left upper extremity soft tissue mass with marked FDG uptake within abnormally enlarged axillary and periclavicular lymph nodes of the left thorax consistent with metastasis. The patient underwent chemotherapy and radiation therapy with some response.

Conclusion: STS is a rare disease which can be easily missed by the clinician. A high index of suspicion is needed for diagnosis. This is the first reported case of a STS discovered in a dialysis access site. As with all malignancies, early diagnosis is key to patient survival. This can prove difficult in STS if no mass is noted on exam. Thorough physical exams and increased vigilance by all physicians caring for immunosuppressed patients is invaluable.

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A Rare Anatomical Variation Between the Radial and Ulnar Nerves in the Arm: a Report of a Case

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Abhinav, Vasudevan, Hein, Maung

Routine dissection of an 85 year old cadaver demonstrated a rare communicating branch between the radial and the ulnar nerve in the arm. The communicating branch begins at the radial nerve after it exits the triangular space and joins the ulnar nerve distally. With little data of this variation it is difficult to estimate the frequency of this variation in the normal population and shows a need for further research into quantifying it. The only other documented case of a communicating branch of this nature has been by Sarikcioglu et al, making this the second documented case to date.

Perioperative Management of Spontaneous Splenorenal Shunts in Orthotopic Liver Transplant Patients

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Nadia Awad MD, Rashad Choudry, MD, Afshin Parsikia, MD, Stalin Campos, MD, Kamran Khanmoradi MD, Radi Zaki MD, Mindy Horrow, MD, Jorge Ortiz MD

Objective: Spontaneous splenorenal shunts (SRS) can cause significant vascular steal from the liver. There is no accepted algorithm for treatment of SRS before, during, or after liver transplant, and evidence for efficacy of different treatment plans is largely limited to case reports and small series.

Methods: A review of the literature and our institution's experience regarding SRS in liver transplant candidates and recipients was performed.

Results: Involution of small SRS after liver transplantation is well known and these SRS may not need intervention. TIPS may decrease the porto-systemic gradient in patients with large SRS. If intra-operative compression of the SRS demonstrates significant improvement of allograft portal venous flow, operative ligation may be justified. Ligation of the left renal vein for large SRS is a safe and effective method of preventing portal venous steal. For concomitant SRS and portal vein thrombosis, renoportal anastomosis can be performed. When an SRS compromises portal flow in a post-operative patient, a percutaneous approach to shunt ligation may improve portal function.

Conclusion: Experience in the approach to and treatment of SRS in liver transplant recipients is largely limited to case reports and small series. A variety of pre-, intra-, and post-operative strategies are possible. Further investigation into the best approach to SRS is warranted as the presence and persistence of SRS can lead to allograft dysfunction and possible allograft loss.

Presentation and Emerging Treatment Modalities for GIST Tumors

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Purpose: Gastrointestinal stromal tumors (GIST) are a rare subtype of malignancy that occurs throughout the entire length of the bowel from the esophagus to the rectum. Given their propensity for insidious growth, development of symptoms in these patients can occur over a prolonged period of time thus making accurate pre-operative diagnosis a challenge.

Methods: We report four patients who presented to our institution each with a different clinical scenario. Patient 1 reported weakness and syncope, with Patient 2 complaining of symptoms of abdominal pain and bowel obstruction. Patient 3 displayed symptoms of right lower quadrant pain consistent with acute appendicitis, and Patient 4 had an incidental tumor discovered at the time of gastric bypass for morbid obesity.

Results: In each case, operative exploration yielded a GIST tumor that was completely resected. Three patients had a tumor arising from the stomach and one patient's tumor originated in the ileum. Two patients had metastatic disease at the time of exploration. All patients were discharged to home within five days.

Conclusions: The presentation of GIST tumors can be varied depending on their location and rate of growth. Our series of four patients illustrates that spectrum with one patient presenting with frank peritonitis, one with diffuse, non-localized abdominal pain, one with no abdominal pain at all, and the fourth with GERD and morbid obesity. A non-specific clinical presentation and rare overall prevalence makes diagnosing GIST difficult, thus a higher clinical suspicion is necessary for earlier diagnosis.

Vulnerable Populations in Disaster Environments

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This discussion will present the obstacles to health and well being faced by vulnerable populations in a disaster environment. Various vulnerable groups will be identified together with issues they may face in disaster scenarios where resources are limited or unavailable. Targeted to first responders such as surgeons and allied medical personnel, this presentation and discussion will call attention to the difficulties faced by vulnerable populations and their caregivers. Resources and tools will be given to attendees help them prepare for their role in caring for these populations in a disaster.

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Lateral Translation of the Proximal Tibia: An Unrecognized or Under Reported Contribution to the Development of Arthritis of the Knee and A Proposed Mechanism for It's Development

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Introduction: Lateral translation of the proximal tibia is either unrecognized and certainly under reported as a contributor to the development of arthritis of the knee. The investigators present clinical evidence for its existence along with possible mechanisms for its development and the problem it poses. We do not know the precise mechanism for the development of osteoarthritis of the knee. However, certain risk factors have been identified.

Method: Standing radiographs of adults with varus knees were analyzed, along with similar images of children with Blount's disease in addition to radiographs of individuals with medial compartment arthritis of the knee. The individual femoral and tibial mechanical axes were determined. Next the loss of resistance to vertical loads on the medial compartment of the knee was documented. Finally a 2-dimensional model of the loading trigonometry of the lower extremity based on contact points on the joint surfaces of the distal femur and the proximal tibia was created.

Results: Loading patterns on the proximal tibia were better illustrated by a two cone pattern of load transfer from the distal femur to the proximal tibia. Using this method, helped us to visualize how the problem can developed and progress.

Conclusion: Lateral translation of the proximal tibia will cause asymmetric edge loading, resulting in edge wear, erosion, angulation, instability and the associated arthroses.

Effects of Intraluminal Chemotherapy on Colorectal Cancer: Study In An Orthotopic Murine Model

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Purpose: Previously, intraluminal chemotherapy was used as an adjunct to surgery to decrease tumor micro metastasis. Theoretically, transanal chemotherapy offers benefits over conventional chemotherapy as it acts directly on the mucosal surface where the tumor transformation takes place. The purpose of our study was to evaluate the effects of transanal chemotherapy in a true orthotopic colorectal cancer murine model for subsequent potential application in humans.

Methods: An intraluminal-mucosal orthotopic colon cancer murine model was designed by doing transanal low dose mucosal coagulation, using a specially designed electrode, 2cm inside the anus. Followed by transanal instillation of LS174T human colon cancer cells(1x10⁶) in NOG mice. Control, 5FU, Irinotecan and Oxaliplatin groups had 10 mice each. Treatment groups underwent weight adjusted 3 doses of alternate day transanal drug instillation after intraluminal tumor was confirmed by Coloview-mouse colonoscope.

Results: Control group showed a mean survival of 3.5wks, tumor size of 14±4mm with widespread metastasis. 5FU group had an increased mean survival of 12wks, disappearance of primary tumor in 7 mice and mean tumor size of 0±3mm with decreased metastasis. The Irinotecan and Oxaliplatin groups showed increased survival of 5wks and 6.5wks with tumor sizes of 5±2mm and 3±2mm respectively.

Conclusions: Transanal chemotherapy shows promising effects on colonic tumor with considerably decreased primary tumor size and increased survival. This treatment option could be applied to patients with early rectal tumors, colonic dysplasia and syndromes with predisposition for colorectal cancer. This is the first report of effects of transanal chemotherapeutic agents in a true orthotopic colorectal cancer model.

High Intensity Focused Ultrasound Prostate Cancer Therapy

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High Intensity Focused Ultrasound (HIFU) is a minimally invasive curative therapy for early stage prostate cancer. The purpose is to destroy prostate cancer minimizing common complications such as transfusions, incontinence, impotence, and prolonged hospital stays. HIFU also avoids ionizing radiation side effects and complications relative to external beam radiation therapy or radioactive seed implantation.

Men with low stage prostate cancer in a localized or locally advanced to the seminal vesicles may be treated. Patients who have failed radiation therapy with recurrent localized biopsy proven cancer can also be treated with salvage HIFU successfully. HIFU therapy is currently being performed in the United Kingdom, Japan, Germany, Mexico, Canada, and many other countries including those in South America and several island countries.

Although twenty-year statistics are not available at this date, early results indicate a high cure rate for patients with intermediate Gleason grade and prostate specific antigen levels less than 10 mg/mL. The preservation of potency and continence in men with active lifestyles while curing the prostate cancer is the primary motivation for HIFU.

In conclusion, High Intensity Focused Ultrasound therapy is a novel approach to curing prostate cancer as a primary treatment. It is an outpatient therapy even for re-treatment of recurrent prostate cancer after failed radiation therapy. The results are good with reduced side effects. It is currently under evaluation for approval in the United States by the Federal Food and Drug Administration.

Implementing Biomarkers for the Quantification and Resolution of Traumatic Brain Injury in Physical Impact Versus Non-Contact Brain Trauma Animal Models

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Driven by the increased use of improvised explosive devices on the modern battlefield, Traumatic Brain Injury (TBI) can be unknowingly sustained through blast energy transmission without requiring direct contact injury to the victim. TBI continues to be difficult to assess clinically, as modern imaging techniques are limited in sensitivity, specificity, and availability. This project investi-

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gated the potential to utilize a radiolabeled ^{64}Cu -ATSM hypoxia probe to overcome these challenges, and improve current TBI diagnosis and medical treatment ability.

The research study involved controlled cortical impact (CCI) animal injury modeling in an autoradiographical experimental protocol employing serial brain tissue sectioning and phosphor imaging techniques. Image analysis was carried out using specialized software to find the average pixel intensity to background intensity ratio across an experimentally determined set of regional structures within the brain. Regional image intensity ratios corresponded to the degree of injury sustained in experimental animal models.

Combined collected data indicated a consistent hypoxic response to TBI that was concentrated within the hippocampus region of the brain. This response was verified across repeated experiments and through comparison to sham-injury control experiments. Preliminary findings presented in this paper reinforce the goals of this project, and provide an initial demonstration of the ability to characterize TBI using novel molecular biomarker ligands.

By employing a CCI model of TBI, we were able to demonstrate accumulation of ^{64}Cu -ATSM within injured tissues. Collected data provides compelling preliminary evidence for the potential use of ^{64}Cu -ATSM to identify tissue hypoxia following experimental CCI. The current study provides an important first step in validating the utility of neuroimaging biomarkers to efficiently characterize how the brain is altered following TBI.

Mild Traumatic Brain Injury Gene Bolles, MD

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Purpose: Traumatic brain injury results in an estimated 4.5 million deaths per year. Traumatic brain injury identification is divided into mild (14-15 GCS), moderate (9-13 GCS) and severe (below 8 GCS). Mild traumatic brain injury accounts for the largest portion of all traumatic brain injuries. There are over 1 million cases per year in the USA with 20% left unable to read and 30% with permanent neurologic disability.

Past and Present: Decompressive Craniectomy Gene Bolles, MD

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Purpose: Decompressive craniectomies are most commonly done for relief of intracranial pressure secondary either to traumatic brain injury or acute stroke, and sometimes other forms of massive intracranial pressure.

Spine Surgery - A Historical Perspective Evalina L Burger, MD

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Spine surgery has made significant leaps in patient safety and outcomes with the help of modern day techniques. Former practices such as months of casting, bracing and traction has fallen by the wayside in the wake of powerful instrumentations

techniques as well as our ability to use navigation and model the anatomy during the case. Pedicle screw instrumentation has been used since 1993 and has sustained its growth in the market despite several tough lawsuits, as surgeon realized that fixing the spine lead to fewer complications in the long run. Adding the ability to navigate screws into the bone without having to do wide decompression to actually see the anatomy has lead to short operating times with less blood loss and made the surgery more palatable and tolerable for even older patients. These new techniques are now allowing us to perform surgeries on patients that would have not qualified before and to correct severe deformities anatomical, to allow better functional outcomes. Patient safety is under scrutiny and as we add these new techniques, the responsibility for utilizing them and understanding their limitations, add a whole new dimension to the surgery. This also impacts training as this equipment are not readily available and begs the question as to what level of surgery we allow our trainees to perform once they graduate and do not have access to these expensive technology. The lecture will outline the use and pitfall s of these modern techniques.

Percutaneous Radiofrequency Ablations of Metastatic and Primary Lesions Aaron Burgin, MD

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Roger L. Gonda Jr, MD, FACR, FICS(Radiology) Chair Dept of Radiology, Providence Hospital Pierre Zayat, MD

Purpose: The purpose of this study is to determine local control of primary and metastatic disease using image guided percutaneous radiofrequency ablation.

Methods: A retrospective analysis of 31 radiofrequency ablations for hepatic, renal and pulmonary lesions was performed. Up to 3 lesions at a time were ablated. Radiofrequency ablation was performed under deep conscience sedation or general anesthesia with CT guidance used in all cases. Lesions included: HCC as well as metastatic disease from colorectal, breast, lung, carcinoid, adrenal cortical, ovarian and melanoma primaries.

Results: A total of 22 patients underwent CT guided radiofrequency ablation. 3 patients underwent multiple rounds of ablations. The median age of patients was 61 years. There were 11 female patients and 10 male patients. The median tumor size was 2.0 cm (0.6-4.2 cm). Successful ablation was performed in all patients. Pain was the most common complication. Two patients developed subcapsular hematomas. Follow up imaging is still being obtained for final data set.

Conclusion: Percutaneous radiofrequency ablation appears to be safe and effective for local control of primary and metastatic disease.

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The Chemokine Receptor CXCR4 as a Novel Independent Prognostic Marker for Node Positive Breast Cancer Patients

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Purpose: Node positive breast cancer patients are a high risk group. However, not all such patients will succumb to the disease. The molecular basis for this biologic heterogeneity is poorly understood. The chemokine receptor CXCR4 is a marker of metastatic disease. Its prognostic role in node-positive patients is unknown. We postulate that high CXCR4 overexpression in node positive breast cancer specimens predicts a poor outcome.

Methods: 185 node positive breast cancer patients were evaluated. All had standardized treatment and surveillance protocols. CXCR4 levels were detected with Western blots. Results were quantified against 1 Åµg of HeLa cells. CXCR4 expression was defined as high (=7.5-fold) or low (<7.5-fold). Primary endpoints were cancer recurrence and death. Statistical analyses were Kaplan-Meier curves, log-rank test, and Cox proportional hazard model, with a p value of = 0.05 as significant.

Results: The mean follow up time was 54 months; 148 patients (80%) had low CXCR4 and 37 patients (20%) had high CXCR4 level. The 5 year overall survival (OS) for the low and high CXCR4 group was 69% and 57%, respectively (p=0.02). The 5 year disease-free survival (DFS) for the low and high CXCR4 group was 62% and 53%, respectively (p=0.08). On multivariate analysis, T stage (p=0.001) and grade (p=0.04) were independent predictors of DFS, while T stage (p=0.005), grade (p=0.024), and CXCR4 level (p=0.01) were independent predictors of OS.

Conclusion: High CXCR4 level in cancer specimens independently predicts a poor outcome for patients with node positive breast cancer.

Breast Conservation Therapy is a Viable Option for Patients with Triple-Receptor Negative Breast Cancer

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Introduction: Triple-receptor negative breast cancers (TNBC) are aggressive tumors that lack estrogen-receptor, progesterone-receptor, and HER-2 expressions. Comparative analysis between breast conservation therapy (BCT) versus mastectomy for TNBC is sparsely reported. We hypothesized that, despite its aggressive behavior, TNBC can be managed with BCT.

Methods: Outcomes for 202 patients with TNBC who were treated with BCT or mastectomy were analyzed. Primary endpoints were cancer recurrence and death. Statistical analysis performed included Kaplan-Meier survival analysis, log-rank, independent samples t-test, Cox proportional hazard model, and Chi-square. A p-value < 0.05 was considered statistically significant.

Results: BCT was performed in 31% of patients. The recurrence rate for BCT and mastectomy was 30% and 43%, respectively (p=0.089). The 5-yr overall survival (OS) was significantly better for the BCT group than the mastectomy group (90% vs 69%; p=0.015). However, this was likely due to the mastectomy group having a significantly larger tumor size (T3/T4: 5% BCT vs 26% mastectomy; p=0.006), advanced N-disease (N2/3: 11% BCT vs 24% mastectomy; p=0.0022), and advanced stage of disease (Stage 3: 11% BCT vs 34% mastectomy; p=0.001). On multivariate analysis, surgical approach had no effect on either disease-free survival (p=0.34) or OS (p=0.13); only t-stage was an independent predictor of disease free survival (p=0.01) while N-stage was an independent predictor for OS (p=0.03).

Conclusion: Despite TNBC's aggressive behavior, breast conservation therapy is a viable surgical option for selected patients with TNBC.

Single Incision Laparoscopic Cholecystectomy (SILC) Using Non Articulating Instruments - Our Institutional Experience

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Purpose: SILC was first described in 1999. Many techniques using new instruments have emerged but none has been standardized. We describe our technique and our experience, using non articulating instruments and conventional trocars. **Method:** Patients who underwent SILC over 2 years (July 2009-July 2011) were included in the study group. All laparoscopic cholecystectomies done at the same time by the same surgeon were included in the control group. Demographic data, previous abdominal surgeries, bile spillage, conversion, and duration of surgery were recorded. **Results:** Seventy patients underwent SILC and 115 patients had laparoscopic cholecystectomy. Ninety-three percent of SILCs were done in women as compared to 68% in the control group (p<0.0001). More SILC patients were younger (65% were 30-50 years old) as compared to control patients (60% were 50-70 years old, p<0.001). Mean duration (Å± standard deviation) of SILC was 73Å±16 minutes as compared to 66Å±24 minutes in controls (p<.0001). Of the first 20 SILC, 9 required insertion of additional instruments and 1 was converted to laparoscopic cholecystectomy. The subsequent 50 cases had only 1 conversion (p =0.001). In the first 20 SILC, one patient (out of 3) with BMI above 35 required conversion to laparoscopic cholecystectomy and one required insertion of an additional instrument. In the last 50 cases, all the patients with BMI above 35 (n=6) were done successfully without any additional instrument insertion or conversion. **Conclusions:** SILC has a learning curve. Patients with BMI>35 can undergo SILC. With experience, SILC has comparable outcomes to laparoscopic cholecystectomy in properly selected patients and is economical.

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Ultrasound-Guided Thrombin Injection of Arterial Pseudoaneurysms

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Introduction: The incidence rate of iatrogenic pseudoaneurysms following endovascular interventions varies from 0.5-8% and increases with the use of large-bore sheaths, post-procedure anticoagulation, and intra-operative anti-platelet therapy. The objective of this study is to share one institutions experience with ultrasound-guided thrombin injection for pseudoaneurysm repair in an era of increased use of antiplatelet and anticoagulant agents.

Methods: A retrospective chart review was conducted of 24 patients who underwent thrombin injection for pseudoaneurysm repair from February, 2009 to October, 2010. Recorded details include pseudoaneurysm characteristics, anticoagulation and antiplatelet administration, and ACT levels. Multivariate analysis using Spearman's correlation for nonparametric data was utilized to test for correlations between ACT, platelet count, pseudoaneurysm size, and amount of thrombin.

Results: 46% of the patients had received antiplatelet agents during their catheterizations. 12% of the patients had received Coumadin prior to thrombin injection. Pseudoaneurysms had a mean diameter of 3.5 cm (Range 1.9-8.1), a mean neck length of 1.2 cm (Range 0.5-3.0), and a mean neck width of 0.21 cm (Range 0.06-0.7). There was a correlation between platelet count and pseudoaneurysm size ($p=-0.43$, $p=0.04$). The mean ACT at the end of catheterization was 242 (+/- 45). The median amount of thrombin injected was 800 units (Range 250-3000). Each pseudoaneurysm case was successfully thrombosed after 1 thrombin injection. There were no procedural or post-operative complications, and 100% of peripheral pulses were preserved.

Conclusion(s): Ultrasound-guided thrombin injection for repair of iatrogenic pseudoaneurysms is an effective and safe treatment, and is not precluded by the use of anticoagulants or antiplatelets during catheterization.

Functional Outcomes of Patients with Discogenic Back Pain Treated with Percutaneous Disc Decompression using a Plasma Wand

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Caitlin M. Clark, B.A., Medical Student, University of Texas, Houston, TX

The purpose of this study was to determine the functional outcomes of patients with intractable discogenic back pain treated with a percutaneous disc decompression using a plasma wand. The study design is a retrospective analysis of 160 chronic pain patients treated from 2007 to 2009. All patients were evaluated with clinical examination, Oswestry Disability Index (ODI) and Visual Analog Scale (VAS) before and after plasma disc decompression. Patients were selected for discography based on persistent back pain unresponsive to oral medication and epidural steroid injections. Only those patients with positive discography were candidates for PDD.

The ODI showed the mean value of the index improved from 71 to 54 ($p<0.008$). The mean VAS changed from 8.4 preoperatively to 5.5 after the PDD treatment ($p<0.0001$).

This study evaluates the efficacy of treating discogenic low back pain with a plasma energy source. The ability to treat chronic discogenic low back pain in a minimally invasive manner is intellectually very appealing, as these patients are very difficult to manage, with very few options for care. The small sample size prevents any generalizations in this regard, but it is felt the technology does show promise. Patients with a single positive discography level appeared to fare better than those with more than one level. No clear relationship existed between the duration of pain symptoms and effectiveness of the treatment. Further experience with prospective trials will be required to provide definitive data regarding this treatment modality.

A Variation on Minimally-Invasive Plating of Proximal Humerus Fractures

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Objectives: To describe a variation of the recently described surgical technique of percutaneous plating for proximal humerus fractures and evaluate the 6 week pain level, axillary nerve function, and general functional outcome of a single surgeon's case series.

Design: Retrospective case series

Setting: Level II community hospital

Patients: From 2010 to 2011, 26 consecutive patients with Neer 2 or 3-part surgical neck proximal humerus fractures underwent surgery by one trauma fellowship-trained general orthopaedic surgeon. 18 of 26 patients were followed to at least 6 months.

Intervention: The technique involved 2 minimal incisions. One incision was a lateral deltoid split and the other of a more distal shaft incision. A proximal humerus-specific locking plate was implemented. Variation of previously described technique involved using cannulated screws after provisional k-wire fixation.

Main Outcome Measurements: Pain level, axillary nerve function, and general functional status were evaluated. The presence of any complications was noted.

Results: There were no axillary nerve injuries and no loss of reduction. One patient underwent revision for intra-articular screw placement.

Conclusion: This case series demonstrated that this minimally invasive approach to open reduction and internal fixation of proximal humerus fractures using a proximal humerus locking plate and cannulated screws is a promising alternative to the standard deltopectoral approach.

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Management of Intraventricular Tumors Chandrashekar Deopujari, MD

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Lateral and third ventricular tumors are relatively uncommon. They usually present in children and young adults and many have benign pathology. They may be primary intraventricular or arise from the structures in the wall mainly exophytic in the ventricle. Access to these tumors is often difficult and proper choice of approach is an important factor in determining outcome apart from their adherence to ganglionic structures and the midbrain. Endoscopy has added another dimension in surgery of these tumors. We would like to share our experience of 185 cases treated over last 15 years. Colloid cyst was the most common lesion followed by low grade gliomas. Almost 40 percent lesions were in children. Location of the tumor and age of the patient can give a very good idea about the pathology of the tumor apart from imaging characteristics. Choice of approach and related complications will be discussed. Endoscopy was used for third Ventriculostomy, septostomy, biopsy and occasional tumor removal. We would like to discuss usefulness of this strategy which still has several limitations in our experience.

Experience with Extended Endoscopic Transnasal Surgery Chandrashekar Deopujari, MD

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Nishit J Shah, Vikram Karmarkar, Naresh Biyani

Endoscopic Endonasal Approaches are now being used for indications beyond the pituitary tumors. This minimal access approach gives us panoramic view of the midskullbase and allows maximal access from the cribriform plate to C2. Neurovascular structures, however, limit the lateral access. More precise bone removal with better understanding of anatomy from inferior perspective and vascularized flap(s) for closure in close collaboration with the ENT colleagues has achieved greater success with safety for these procedures. We have performed over 550 endonasal endoscopic procedures over last 16 years for pituitary and other skullbase lesions. We share the experience of 80 cases beyond the pituitary for this presentation. This includes Craniopharyngiomas, Chordomas, Meningiomas and some other unusual lesions. The learning curve from endoscope assisted microsurgery to exclusive endoscopic surgery and recent applications to some parenchymal lesions as well as for odontectomies will be discussed.

High Dose Rate (HDR) Brachytherapy in the Treatment of Prostate Cancer

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We will present our historical and current patient data on the treatment of prostate cancer with HDR brachytherapy – both as monotherapy for low risk disease, and as combination therapy with traditional radiation therapy for more high-risk disease. We will look at the treatment risks and benefits, as well as toxicities and possible side-effects, as well as AUA scores after treatment. HDR (high dose rate) brachytherapy has a therapeutic advantage in delivering high dose, precise radiation therapy directly to the prostate, while sparing the normal surrounding tissues. There

are many treatment options for prostate cancer, including no treatment for patients with low-risk disease, and HDR brachytherapy is a well-tolerated treatment option that can be performed on an outpatient basis, with good results and low toxicity. We hope to show that HDR brachytherapy is an additional treatment option in possible treatment considerations for prostate cancer.

Peripancreatic Soft Tissue Involvement as a Novel Independent Predictor of Outcome for Patients with Resected Pancreatic Malignancy

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Gazi B. Zibari, MD, FACS, FICS; Elnaz Jafarimehr, MD; Ouyen Chu, MD, FACS; Gregory P. Wellman, MD, FACR; Runhua Shi, MD, PhD; Hosein Shokouh-Amiri, MD, FACS, FICS.

Purpose: The impact of an involved peripancreatic soft tissue (PST), irrespective of resection margin status, following a pancreatectomy is not known. We determine the impact of such involvement on a cohort of patients with pancreatic malignancies.

Methods: Data on 117 patients who had surgery for pancreatic malignancies between 2/1/1998 and 5/31/2010 were retrospectively analyzed. Patients were categorized into 3 groups: Group 1=R1 resection (N=33), Group 2=R0 with involved PST (N=22), and Group 3=R0 with uninvolved PST (N=62). Demographics, operative data, tumor characteristics, complications, and overall survival (OS) were assessed.

Results: 77% of patients had adenocarcinoma and 11.1% had neuroendocrine tumors. The operations performed were: Whipple (N=84), distal pancreatectomy (N=18), and total pancreatectomy (N=8). The grades were: 1(11.3%), 2(50.4%), 3(32.2%), and 4(6.1%). The stages were: 1A(4.3%), 1B(19%), 1IA(19%), 1IB(42.2%), 1III(11.2%), and 1IV(4.3%). Stages 1IB-1IV had significantly lower median OS than stages 1I-1IA ($p=0.004$). Five-year-OS for the entire group was 32.7%. The 5-year-OS for N0 and N (+) was 38.3% and 24.3% ($p<0.05$) respectively, and R0 and R1 was 37.9% and 19.5% ($p<0.05$) respectively. Median OS for Groups 1, 2 and 3 were 10.7 months, 12 months, and 37.5 months respectively ($p=0.0002$). Cox regression analysis demonstrated that age, complications, grade, stage, PST involvement, lymph node and margin statuses were all independent predictors of mortality.

Conclusions: PST involvement independently predicts a poor outcome in patients who had pancreatectomy for malignancy. Survival in patients with PST tumor involvement in the presence of a negative resection margin is similar to those with a positive margin.

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Ultrasound Guided Placement of Invasive Monitoring Zaki-Udin Hassan, M.B.B.S.

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Oksana Klimkina M.D. Assistant Professor (Cardiothoracic Anesthesia)
Paul A. Sloan M.D. Full Professor, Vice Chair of Research (Anesthesiology and Pain Medicine)
Jason Garrison M.D.

The workshop has several sections directed to demonstrate different areas of utilization of ultrasound in the clinical practice. In addition, we will also educate the audience on different training options to learn how to use ultrasound. At the end of this workshop the participant will understand different ways how ultrasound has improved patient care in the current clinical practice. The participant will be able to identify how ultrasound can benefit the care of a specific patient collective and if interested the participant can attend specific ultrasound courses to learn specific ultrasound based skills.

Determination of Tendon Location Within the Leg for Use in Muscular Repair

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Asser Youssef, MD, David Ballard, MS1, Anne Hollister, MD

Although the musculoskeletal structures of the human body have been well known for centuries, relatively little work has been published relating to the architectural structure within the muscles themselves. Until now, the anatomy of the tendons within the muscles has seemed unimportant, and the location of the tendon ends has been considered irrelevant to today's common medical practice. However, it has been shown that knowing such information proves useful in newly proposed surgical procedures. When tendon locations are known within a muscle, tendon end-to-end repair is possible and therefore leads to a more efficient procedure as well as a more natural recovery.

In this study, we measured tendon lengths in the legs of eleven human cadavers in order to generate a formula that can be applied to the legs of living individuals that have endured trauma to their lower extremity.

By doing so, we developed a method for quickly and accurately determining the location of tendons within the muscles of the leg that can be used prior to reconstructive surgery.

These results suggest that tendon locations can now be correctly estimated within any human leg a step that is essential to an efficient repair and total restoration of function. In addition to contributing to the advancement of surgery, this knowledge will also greatly benefit the areas of anatomical education and three-dimensional modeling.

Outcome for Patients with Triple-Receptor Negative Breast Cancer is Not Dependent on Race/Ethnicity

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Introduction: Triple-receptor negative breast cancer (TNBC) is biologically aggressive and is associated with a worse prognosis. Since TNBC is more prevalent among African-American women, it has been postulated that the increased prevalence of TNBC contributes to worse outcomes in African-American women compared to Caucasian women. To understand the impact of race/ethnicity on outcome for patients with TNBC, confounding factors such as socioeconomic status (SES) need to be controlled. We examined the impact of race/ethnicity on a cohort of patients of low SES who have TNBC.

Methods: A prospective database created in 1998 collected data on 786 patients with Stage 0-III breast. Of these, 202 patients had TNBC (26%). Primary endpoints were cancer recurrence and death. ZIP code-based income tract and financial data from our computer services were used to assess SES. Data were analyzed using Kaplan-Meier survival analysis, log-rank tests, Cox Proportional hazard regression, chi square test, and t-tests. A p-value = 0.05 was considered statistically significant.

Results: Of the 468 African-Americans (60%) in the database, 138 had TNBC; 64 of 318 Caucasians had TNBC. Mean age at diagnosis was 49 years. Eighty-eight percent of patients had an annual income of = \$20,000, and 79% were either free care or Medicaid at the time of diagnosis. The 5-yr overall survival was 77% for African-American women versus 72% for Caucasian women (p=0.95). On multivariate analysis, race/ethnicity had an impact on disease-free survival (p=0.027) but not on overall survival (p=0.98).

Conclusion: In a predominantly indigent population, race/ethnicity had no impact on overall survival for patients with triple-receptor negative breast cancer.

Technical Approach to Total Laparoscopic Pancreaticoduodenectomy

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Armin Kamyab MD

Background: Total laparoscopic pancreaticoduodenectomy (TLPD) is one of the most advanced laparoscopic procedures. With advancements in laparoscopic technology and instrumentation, laparoscopic pancreaticoduodenectomy is beginning to achieve wider acceptance.

Methods: Data was collected for all patients who underwent a TLPD at our institution from March until July 2011. The TLPD was done with 6 ports on three patients, and 5 ports on one patient, and included a standard lymphadenectomy. Pancreatic stents were used in all 4 cases, and intestinal continuity was reestab-

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lished by intracorporeal anastomoses with radially oriented interrupted sutures similar to the open technique.

Results: Four patients underwent a TLPD for suspicion of a periampullary tumor. The mean operative time was 9 hours and 31 minutes with a mean blood loss of 120 mL. A single surgical assistant was required in addition to the surgical scrub technologist. Visualization was greatly improved in the setting of laparoscopy with no apparent technical limitations. There were no hand ports or conversions, and there were no postoperative complications with a mean length of stay of 6.5 days and a mean follow up time of 5 months.

Conclusion: TLPD is a safe and viable alternative to the standard Whipple procedure, with the added advantage of improved visualization. Mastery of laparoscopy and hepatobiliary anatomy is essential. The benefits as suggested by our early experience include decreased length of stay, quicker recovery, and improved quality of life. Complication rates appear to be improved or equivalent.

Laparoscopic Left Liver Resection for Giant Focal Nodular Hyperplasia

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Armin Kamyab MD

Background: Hepatectomy is used in the treatment of large or symptomatic focal nodular hyperplasia. An open hepatectomy is the standard technique, but laparoscopic hepatectomy is gaining wider acceptance. We present a laparoscopic liver resection of segments 2, 3 and 4.

Methods: The laparoscopic hepatectomy was performed with the patient in a supine position, with two 10mm Hassan and two 5mm Hassan trocars. The liver was resected with a LigaSure device, followed by an endo-GIA stapler across the vascularized pedicles and left hepatic vein. A Pringle maneuver was not performed. There was no evidence of bile leak and hemostasis was assured.

Results: A 30 year old women underwent the above procedure for a large hepatic mass emanating predominantly from segment 3, with imaging findings suspicious for a focal nodular hyperplasia. OR time was 76 minutes, with an estimated blood loss of 300 mL. The postoperative hospital stay was 4 days. There were no intraoperative or postoperative complications. Final pathology showed focal nodular hyperplasia measuring 12 x 9 x 7 cm.

Conclusion: Laparoscopic hepatectomy is a safe and viable technique, with the benefits of decreased blood loss and length of hospital stay compared to the open technique.

Pattern and Management of Foreign Bodies at a Community Hospital

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Vijay Mittal, M.D., FACS

Introduction: Patients with foreign bodies can have a wide array of clinical presentation, from asymptomatic carriage to significant morbidity and sometimes mortality. Hence better understanding and timely intervention is necessary.

Materials and methods: We did a retrospective chart review of

all the patients with foreign bodies, symptomatic as well as asymptomatic, treated at our hospital from January 2001 to March 2011. We evaluated types of foreign bodies, their location, presentation, etiology, diagnosis, treatment, associated complications and outcomes.

Results: Our 121 patients consisted of 63 females (52%) and 58 males (48%). Cardiovascular disease (93%) and diabetes (31%) were the predominant co morbidities. Foreign body types included household items (41%), surgically-created (21%), or sharp bodies including pens and glass pieces (17%). The gastrointestinal tract was the most common location (55%). Patients presented with pain (35%), followed by dysphagia, nausea, shortness of breath (13-15% each). Foreign bodies were either an incidental finding (42%), self-inflicted (37%) or iatrogenic (15%). Foreign bodies were diagnosed by imaging (36%) or operations (39%). Although most patients did not suffer any complications (52%), infection (16%) was the most common. Treatment of most patients was surgical, via either minimally invasive (50%) or open technique (34%). Three patients died from complications secondary to foreign bodies.

Conclusions: Whether self-induced or surgically related, the pattern of foreign bodies is variable. In case of an acute presentation, these patients can be treated successfully; however, delayed symptomatology can lead to significant morbidity. Therefore, early recognition and timely intervention are imperative in avoiding grave consequences.

Hydrogel Sealant Reduces Air Leak and Length of Stay in Decortication Patients

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Purpose: Air leaks are common complications of pulmonary resection, including total decortication. Management often requires chest tube (CT) insertion and longer hospitalization, with a potential increase in morbidity. Sealants have been shown to help control intra-op air leaks (IOAL's) with few studies demonstrating reduction in CT duration and/or length of hospital stay (LOS). We report our experience with a recently FDA approved polymeric biodegradable hydrogel pleural air leak sealant in patients undergoing decortications compared with standard closure techniques.

Methods: Twenty-six consecutive patients who underwent decortication with and without using hydrogel pleural air leak sealant were reviewed retrospectively. Intra- and 3-month postoperative data were assessed for the presence of IOAL's, postoperative air leak, CT duration, LOS, and complications.

Results: The cases of 26 adult male and female patients were reviewed and analyzed. Of these, 12 were treated with sealant and 14 were treated with standard techniques. Post-op air leak ($p=0.0472$), mean and median CT duration, and mean and median LOS in the pleural sealant group were all statistically significantly lower than in the control group. No significant difference in complications was found.

Conclusions: The results of this single-center, single-surgeon, retrospective review demonstrate statistically and clinically significant reductions in intra- and post-op air leaks, CT duration, and LOS, with sealant use compared with standard management alone. They suggest that the use of a polymeric hydrogel pleural sealant in decortications, in which IOAL tend to close as the lung tissue heals, may result in both improved surgical outcome and health care economic benefit.

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Surgery for Diverticulitis: A Re-Evaluation of the Changing Trends Tafadzwa Makarawo, MD

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Steffan Eichenauer; Jason Lee; Alasdair McKendrick, MD and Vijay Mittal MD

Objective: Since the landmark work of pioneering surgeons Rodkey and Welch (1984), recent literature has not qualified just how different practice has become, particularly regarding indications and types of procedures being performed. The study aimed to establish the differences in surgical practice between Rodkey & Welch's original work and current practice, research that is unprecedented.

Methods: A retrospective chart review of all patients with diverticulitis between 2006-2010 was conducted. The charts of 150 emergency admissions and 47 elective admissions were scrutinized. Direct comparisons were made with the results of Rodkey and Welch's study.

Results: Rodkey and Welch's work found 33% of emergency admissions requiring surgery with 37% of these being multiple-staged operations. In our study, of the 150 emergency admissions with diverticulitis, 129 (86%) were successfully managed with medical treatment alone, while 12 (8%) required an emergent operation. Although multiple stage operations were necessary in 83% (10/12) of emergency operations, 92% (43/47) of elective operations were one-staged procedures.

Conclusions: Emergency surgeries are performed significantly less frequently in present practice when compared to the practice of our colleagues thirty years ago. The aggressive medical management of diverticulitis has led to downstaging of complicated or recurrent disease processes, avoiding the more morbid multiple-staged procedures and allowing for successful one-stage procedures electively in the majority of our patients.

Traumatic Idiopathic Pneumoperitoneum: Report of a case, literature review, and evidence for a novel etiology

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Purpose: Pneumoperitoneum is an indication of a perforated hollow viscus in 90% of patients, and almost always mandates surgical exploration. The significance of free abdominal air in the blunt trauma patient is more elusive. Idiopathic pneumoperitoneum refers to pneumoperitoneum without a pathologic intra-abdominal source. We present the case of a victim of polytrauma including pneumothorax who had significant IPP on computed tomography, review the literature, and present photographic evidence for a novel mechanism.

Methods: A 17 year old male involved in a high speed MVC was brought to our Level 1 trauma center. He had significant multi-system polytrauma (ISS 66). Due to the presence of pneumoperitoneum he underwent an emergent laparotomy that did not reveal intra-abdominal injuries. He recovered without complication, and was discharged 22 days after admission.

Results: Despite significant pneumoperitoneum no intra-abdominal or diaphragm injuries were identified. Air filled cysts were identified on the adventitia of the distal esophagus projecting to the serosa of the proximal stomach, suggesting a thoracic portal of entry.

Conclusion: Pneumoperitoneum in the setting of severe blunt trauma is not pathognomonic for hollow viscus injury. In carefully selected patients and circumstances, laparotomy may be avoided if the mechanism described is suspected. Prerequisites for nonsurgical management of pneumoperitoneum have been proposed and validated. We present another case of pneumoperitoneum due to blunt trauma without an intra-abdominal source, document the mechanism, and support guidelines previously proposed for nonsurgical management in select cases.

The Latest Clinical Surgical Total Hip Replacement Advancements in Painful Osteoarthritis of the Hip

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Hip joint pain makes the patient seek relief and led to our study of the anatomical changes seen in the hips of 520 patients of total joint arthroplasties.

In the severely painful osteoarthritic hip joint, the synovium appeared to react to the rigors of joint motion on ambulation. The femoral head debris lost via repetitive microfracture on motion tended to self-perpetuate the inflammatory process and attack mast cells and histiocytes. The inability of the scavenger cells to cope with this degenerative process brought cellular lysosomal enzymic release and cell death in bone which served to self-perpetuate the painful inflammatory process.

We have identified afferent peripheral fibers in the hip joint, tendons, synovium, capsule, periosteum bone, and the scarified tissue near articular cartilage as well as nerves in the bone cortex and cancellous red marrow of human joints.

These nerves supply the capsule, the periosteum and the soft tissue of the hip joint. Nerves appear throughout the bone. The intramedullary, endosteal unmyelinated and myelinated fibers enter the bone through the nutrient foramen with the nutrient artery and travel toward the epiphysis and follow along the trabeculae. The myelinated and unmyelinated fibers of bone were found near the vascular elements. On occasion, a few fibers extended to the endosteal wall of the femoral cortex (Plate I).

The anatomic data in our total hip replacement patients was correlated with the clinically evaluated pain before and after surgery. Each patient seen post-operatively had significant relief of pain. In all, we achieved 95 percent hip pain relief in these patients.

Keywords: Femoral Prosthesis and Acetabulum, Polyethylene improved, Collarless femoral prosthetics which decrease stress risers, Cement technique, Titanium porous, Length control, Ceramics, Antibiotics in cement

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Brachial Plexus Injury -Orthopaedic Reconstruction

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Purpose: The purpose of this project is to present current information about brachial plexus injuries and demonstrate procedures used to address secondary orthopedic impairment in the extremity.

Methods: The presentation begins with current developments in the treatment of brachial plexus injuries. That is followed by series of didactic cases that demonstrate the basic surgical techniques used in these reconstructions. Each case will include video of the patients preoperatively, intraoperatively, and post-operatively to demonstrate the techniques and their results.

Results: All patients will demonstrate changes in mobility and function.

Conclusion: By use of these surgical procedures brain injured patients can become more functional, experience an improved quality of life, increase their activities of daily living, and facilitate their caregivers.

Key words: brachial plexus, Erb, contractures, neuromuscular, deformity, denervation, fusion, osteotomy, tendon transfer

Robotic Partial Nephrectomy: Improving Renal Defect Closure Technique to Decrease Warm Ischemia Time

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Purpose: It has been demonstrated that one reason robotic partial nephrectomy may be preferable to laparoscopic partial nephrectomy is diminished ischemia time due to ease of both tumor removal and renal defect closure. Because renal defect closure tends to take longer than tumor removal, minimizing renal defect closure time is critical to decreasing warm ischemia time. In this retrospective robotic partial nephrectomy surgical series, two techniques for closure of renal defects are compared.

Method: Retrospective analysis of single surgeon series.

Results: Number of renal defects closed was 16. Average renal defect size was 3cm, both groups were comparable in size. For interrupted suture technique, renal defect closure time was 11 minutes. For running suture technique, renal defect closure time was 14 minutes.

Conclusions: Renal defect closure time in robotic partial nephrectomy may be decreased using an interrupted suture technique with sliding locking vicryl clip in comparison to a running suture technique.

Cervical Spondyloptosis: Case Reports and Review of the Literature

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Objectives: To present nine cases of patients with traumatic cervical spondyloptosis managed in Abuja. The management protocol and outcome may prove instructive in managing patients with this severity of injury to the cervical spinal cord. Materials and Method Nine patients with cervical spondyloptosis pre-

sented to the unit. These are consecutive patients in a cohort of patients with spinal trauma managed by a single neurosurgeon from August 2009 to date. We collected data on the demographics, presentation, radiology, management and recent outcomes on these patients. Pre-operative and post-operative Frankel grades within 48 h were recorded. Final outcome, evaluated using the Bathel disability index, was scored by 30 September 2011.

Results: Nine patients had severe vertebral dislocations (grade 4), bifacetal dislocations and fractures of the posterior elements. All underwent anterior cervical discectomy and fusion as a first step. Two underwent additional posterior fixation with soft wires and bone grafts. We were unable to achieve satisfactory reduction in two patients. Both were plated insitu anteriorly. One was stable and the other re dislocated within two weeks. He subsequently died. Three more have died as at last follow up review. Remaining patients are quadriplegic and only one has been satisfactorily rehabilitated, and is socially functional.

Conclusions Spondyloptosis of the cervical spine is not a rare injury in Nigeria. Traumatic cervical spondyloptosis was associated with complete and irreversible spinal cord injury. Post operative care is intensive and fraught with dangers such as pyrexia, hypotension and hypoxia. These patients can be extremely difficult to manage especially in resource poor communities. Sharing information about their care may lead to improvements and better outcomes. **KEY WORDS:** Anterior cervical discectomy, cervical spine traumatic instability, Cervical Spondyloptosis, Nigeria, Outcome, Surgical fixation, Trauma

High Dose Rate (HDR) Brachytherapy for Prostate Cancer; A Community Experience

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Introduction: Of the two types of brachytherapy currently used for the treatment of prostate cancer HDR brachytherapy is the newer method and is gaining widespread acceptance, however, Low Dose Rate (LDR) seed brachytherapy is still much more common especially in smaller treatment centers. **Purpose:** To demonstrate the outcomes of HDR brachytherapy for the treatment of prostate cancer in an outpatient community setting, highlighting benefits, drawbacks and limitations as compared to LDR brachytherapy, External Beam Radiation Therapy (EBRT) and surgery.

Method: HDR brachytherapy involves the temporary insertion of treatment catheters called "flexiguides" using a minimally invasive approach through which radiation is delivered accurately. We followed more than 100 candidates undergoing treatment on an out-patient basis at a local community radiation oncology center and monitored pre- and post-treatment PSA levels as well as side-effects and complications. We plan to present our findings as well as data pertaining to treatment efficacy, quality of life, long-term survival benefits and cost of treatment.

Results: There were significant improvements in patient satisfaction and quality of life. Shorter treatment times and precise dosing reduced duration of radiation side effects. Fewer urinary, rectal and sexual complications were observed. Post treatment PSA levels were indicative of good prognosis.

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Conclusion: Our data supports the use of HDR brachytherapy for the treatment of prostate cancer in a small community setting and shows outcomes similar to larger centers. There are many advantages of HDR brachytherapy over seed brachytherapy or EBRT as suggested by lower side-effects and higher patient satisfaction and quality of life.

Trans Scapho-Perilunate Fracture Dislocation: Case Report and Review of Literature Report Alfonso E. Pino, MD, Dublin, TX

Jose G. Ramon, MD and Angel Meardi, MD

Objective: To review the early diagnosis and treatment of this unusual type of injury of the wrist in which diagnosis is missed frequently and serious complications can produce a significant disability to patients. A review of medical literature available is reported.

Methods: In the review of this type of Fracture Dislocation of the Wrist the mechanism of injury is described, early diagnosis and treatment at the first doctor encounter is emphasized. If an experienced ER doctor evaluate the patient, do the correct diagnosis, performed a satisfactory Closed Reduction, followed by referral to an Orthopedist who treat the patient with Standards of care, the outcome of this injury will be much better, but complications are numerous due to the amount of damage produce to the structures involved, including: mal or non union, Carpal Instability, Post Traumatic Arthritis, Aseptic Necrosis of the Lunate (Kiembock's disease), etc. The diagnosis is difficult and most patients are seeing late. Seldom complete recovery is obtained. The Gold Standard of Care is Open Reduction and Internal Fixation, followed by immobilization.

Results: Trans Scapho- Perilunate Fracture Dislocations are associated with a wide variety complications due to: Mal or non union, Post traumatic Arthritis, Aseptic Necrosis of the Lunate, Acute Carpal Tunnel Syndrome, compartment syndrome, adhesions and fibrosis, Limitation of Motion, , lost of grip and pinch in the hand etc. The results in our patient is in progress.

Conclusion: Optimal management Of Trans-Scapho Perilunate Fracture Dislocation of the wrist involves an early correct Diagnosis, appropriated treatment and closed follow up to detect and treat the multiples complication that can arise from this injury. Results are not "As before" patient must alerted of the possible limitations in the future and possibility of other operations.

Mitochondrial Encephalomyopathies: Case Report and Review of Literature Alfonso E. Pino, MD, Dublin, TX

Jose G. Ramon, MD and Angel Meardi, MD

Objective: To review the diagnosis and treatment of this unusual type congenital anomaly in the mitochondria I structures in the cell. Diagnosis is difficult but the clinical Signs and Symptoms can help early in life. A review of medical literature is reported

Methods: In this review of the of the Mitochondrial Encephalomyopathies de mechanism of acquiring this genetical abnormalities is explained, early diagnosis is very important for the parents for studies in genetic material for recognition and of possible prevention of pregnancy. The case presented is a 15 years old

male from Central America, who early in life was diagnosed of N-maline Myopathy. An specialist in genetic abnormalities and genetic counseling is a most. When the correct diagnosis is obtained, appropriate treatment is established and referral if needed. No curative treatment is available now. Some orthopedic corrections of bonny abnormalities, Physical Therapy and pain medication, anti-convulsivants, also Dietetic Supplements (carnitine, Co Q 10, Creatine, increase de Production of ATP) can be use. The outcome depends in the severity of the type of Mitochondrial disease present. The diagnosis is not easy due to multiples varieties of diseases in this group and some patients come late for medical care. Some of the Mitochondrial disease are lethal early in life. Very seldom the disease process is dormant for long period of time.

Results: Mitochondrial diseases are linked with a wide variety complications due to the wide variety of systems involved. From the Orthopedic point of prevention of deformities and ankylosis, correction of flexion contractures, tendons transfers, use of bracing etc. are some of the tools in our armamentarium of only adjuncts in the patient care. The results in general are poor.

Conclusion: Optimal management of Mitochondrial Encephalomyopathies is a multi specialty approach directed to prevention of deformities, correct if possible, increase quality of live and share with other specialties the care of this catastrophic complex medical and Orthopedic. Syndrome.

Current Strategies in Management of Esophageal Perforation Francis J. Podbielski, MD, FICS

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Thomas D. Willson, MD, Ramsen Azizi, MD, Mark M. Connolly, MD

Introduction: Esophageal perforation in the United States has an estimated incidence of 3/100000 and if promptly diagnosed and treated results in excellent patient survival, albeit not without significant morbidity. Etiologies for this condition include post-instrumentation in 65% of cases with an estimated risk of esophageal perforation after EGD being 0.03%. Classic, post-emetic perforation Boorhaave's syndrome accounts for only a minority (16%) of esophageal perforation cases. Management of this condition has evolved over the years with the advancement of technology and surgical techniques.

Methods: Review of current literature on diagnosis and management of all types of esophageal perforation. Personal experience with management of esophageal perforation patients.

Results: This review examines the diagnosis and current treatment options for patients presenting with esophageal perforation, including non-operative management, percutaneous drainage only techniques, open operative drainage and repair, and hybrid methodologies. Overall mortality in the various studies from the literature ranged from 3-14%.

Conclusions: Prompt diagnosis and treatment of esophageal perforation is critical to afford patients that best possible chance for survival. Options for treatment vary depending on the location of the perforation. Novel techniques such as esophageal stenting offer the surgeon an alternative to open repair.

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Lessons from the Corporate Boardroom: A Checklist and Evaluation of Executive Benefits for Surgeons and Surgical Subspecialists

Victoria J. Powell, JD, LL.M. (taxation), Ridgeland, MS

Silas H. Harrington, JD, LL.M., Laura Stewart, CPA,

Purpose of study was to determine if fringe benefit rules and other executive benefit provisions of Internal Revenue Code utilized by large corporations to benefit highly compensated executives could be applied to surgeons in private practice using similar legal structures.

Legal research, including interviews with national experts in subspecialties of pension, fringe benefits, corporate law, insurance law, to include captive insurance laws, were all employed, as well as review of case law and consultation with in-house counsel of major corporations in financial services industry.

While results will potentially be changing with change of Congressional and executive leadership, certain laws have great longevity, some in the range of more than 50 years in the tax code, so that absent overreaching reform, current results are considered relatively reliable and legal responses to changes can be somewhat nimble. Current law permits current advantages, which should be utilized while available to this population of surgeons.

Conclusions reached are that few, probably under 5%, of surgeons are aware of the tax advantages currently available under the Internal Revenue Code, nor are poised to take advantage of imminent changes to their substantial advantage, leaving potentially hundreds of thousands per year of unnecessary tax dollars to be paid to the government.

An Unusually Large Number of Coracoclavicular Joints Seen in Patients in a Small American Town

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Introduction: A rare anatomical anomaly is found in unusually large numbers in one small American city.

Methods: A random screening for the coracoclavicular joint (CCJ) was carried out by examining the shoulder and chest x-ray images of patients presented to the 2 hospitals located in a small town, over a period of 2 years. All the films stacked up for radiologist's reading and all the x-rays that were brought into orthopedic office were studied on some days randomly. Strict radiological criteria were laid down for identifying the CCJ. Symptoms and signs were recorded.

Results: A total of 1328 x-rays were seen. 47 patients with CCJ were identified. All patients are African Americans. F:M = 26:21. Age ranges from 30-91. Eight were bilateral. Six shoulders were symptomatic, 4 of them from rotator cuff related symptomatology. One had a completely formed CCJ with CCJ arthritis and had obtained significant relief with steroid infiltration under fluoroscopy. None had surgeries. None had restricted range of motion from CCJ.

Discussion and conclusion: Firstly, from a thorough literature search it is confirmed that in this study, globally a highest number of CCJs are collected from one small North American town with a total of 29,000 population, of whom 91% are African Americans. Whilst acknowledging the shortcoming that this was not designed to be a comparative study, we feel African Ameri-

cans are more likely to have this congenital anomaly. Secondly, sporadic case reports have shown that only a minimal few shoulders were symptomatic and had undergone surgery. Our study findings advocate a high threshold for any surgical intervention. Other pathologies may need to be thoroughly investigated and excluded, whilst ignoring this conspicuous anomaly that tantalizingly seeks attention of the surgeon.

Scholarly Activity: Investigating the Benefits and Burdens of Research During Residency

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Background: Scholarly activity is considered an important part of medical education in all specialties. Many programs require research for the promotion of their residents. However, the effect of such requirements on residents and their medical education is not well understood.

Methods: A 22-question survey was sent to residents in several specialties in the Detroit, Michigan area to determine the impact of research on their training and future endeavors.

Results: 108 of 120 residents from different specialties responded resulting in an 86.4% response rate. 98.1% (n=106) of residents conduct research at their programs. Of these, 67.5% (n=73) showed interest in research, and 91% (n=99) felt research had a positive effect. Most felt they had adequate educational 86.1% (n=93) and lab 76.8% (n=83) resources respectively. 64.8% (n=70) felt comfortable conducting clinical research. On average, residents spend 10.37 hours on research/month, and 64.8% (n=70) feel capable of conducting clinical research. Residents also felt comfortable evaluating the research of others 60.1% (n=65) and explaining research to patients 85.1% (n=92). Of the residents surveyed, 36.1% (n=39) feel that research should be mandatory, 59.2% (n=64) believe it should be optional and 4.6% (n=5) feel that it is a waste of time. Additionally, residents suggest to allocate protected time for research.

Conclusions: From a resident's perspective, research is an important part of residency and puts little burden on residents. However, research would be more beneficial as an option rather than being mandated, unless adequate time is allocated to conducting research during the course of residency.

Intradural Spinal Cord Tumor Resections by a Neurosurgeon at a Tertiary Care Hospital

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Tarun Ramayya, David V. LaBorde MD, Neurosurgical Resident, Gerald Rodts, Jr., MD, Professor of Neurosurgery, Director of Spine Fellowship

Purpose: A retrospective analysis was conducted on patients who underwent surgical resection of an intradural spinal cord tumor between 9/4/1998 and 10/1/2010 by one surgeon.

Methods: Cases included adults (>18 years old) who had undergone spinal tumor resections. Endpoints examined included complication rates, discharge destinations, and lengths of hospitalization. Data was obtained via chart abstraction. Contingency tables were

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created, and estimates of relative risk (RR) with 95% confidence intervals (CIs) were calculated to determine the relationship between the endpoints of interest and a variety of variables (e.g., sex, ethnicity, tumor location). 66 cases met inclusion criteria.

Results: The median lengths of stay for males and females were 4 and 5 days, respectively; the distributions in the two groups differed significantly (Mann-Whitney U=541.5, n_{male}=30, n_{female}=36, P<.05 two-tailed), but the two sexes did not have a statistically different risk of having non-home discharge destinations, or surgical complications. Whether or not a patient is Caucasian had no statistically significant correlation to the clinical outcomes of interest. Patients with intramedullary tumors were 3.0 (95% CI [1.7 - 5.2]) times more likely to have non-home discharge destinations and 2.3 (95% CI [1.1 - 3.0]) times more likely to encounter surgical complications than patients with extramedullary tumors. Finally, tumor resections that required arthrodesis were 2.1 (95% CI [1.1-4.0]) times more likely to be discharged to non-home destinations than resections that did not require arthrodesis.

Conclusion: Though this analysis is limited by the small number of tumors identified, it is one of the largest of its kind to date.

Update Stem Cell Therapy for Heart Failure; Review of Literature Adib H. Sabbagh, MD, FICS

ICS-US Past President, Tucson, AZ

Heart failure causes death in more than 15 million people annually worldwide, and approximately 5 million are in the U.S.A., treatment is limited to: medical therapy, cardiac assist devices, heart transplantation with its drawback of limited donors and rejection, and artificial heart which have not been perfected as yet. Stem cell therapy is giving new hope to this fatal heart disease using autologous bone marrow stem cells, skeletal myoblasts, and recently cardiac stem cell through biopsy, with markedly less cost. This therapy is still in its infancy, with certain risk of complication with arrhythmia, however many studies showing evidence of improved control and success. In the presentation will discuss in detail the mode of application, the eligible candidates, and the risks and benefit of this therapy.

Patient Protection and Affordable Care Act (Pub.Law.No.111-148): Challenges and Opportunities for AMCs

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Educational Goals: Review the rational and historical background of healthcare reform. "Obama Care": What is in it? AMCs: Challenges and Opportunities. Is Fee-For-Service DEAD? Preparing for the Future!

Diffuse Correlation Spectroscopy for Cerebral Monitoring During Carotid Endarterectomy: A Novel Technique

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Background: Carotid endarterectomy (CEA) is the most frequently used surgical intervention to restore blood circulation for patients with extracranial internal carotid artery (ICA) stenosis. Intraoperative monitoring of cerebral hemodynamics during CEA provides essential information for detecting cerebral hypoperfusion induced by temporary ICA clamping during surgery and post-CEA cerebral hyperperfusion syndrome (CHS). This study evaluates a novel near-infrared diffuse correlation spectroscopy (DCS) flow-oximeter in monitoring cerebral blood flow (CBF) and cerebral oxygenation changes during and after CEA. The optical measurement is compared with a concurrent electroencephalogram (EEG) monitoring to test the measurement sensitivities of the two techniques.

Methods: Twelve patients undergoing unilateral (left or right) CEA participated in this study. Two probes containing source and detector fibers were taped respectively on the surgical and opposite (control) sides of forehead. Each probe was connected to a DCS flow-oximeter which had two source wavelengths of 785 and 854 nm. Relative change of cerebral blood flow (rCBF) was extracted from the measured light intensity temporal autocorrelation function. The relative changes of oxygenated and de-oxygenated hemoglobin concentrations (

Purpose: Traumatic brain injury results in an estimated 4.5 million deaths per year. Traumatic brain injury identification is divided into mild (14-15 GCS), moderate (9-13 GCS) and severe (below 8 GCS). Mild traumatic brain injury accounts for the largest portion of all traumatic brain injuries. There are over 1 million cases per year in the USA with 20% left unable to read and 30% with permanent neurologic disability.

Results: During CEA, rCBF and oxygenation in surgical sides were largely altered by ICA clamping (Δ rCBF = $-24.7 \pm 7.3\%$ (mean \pm SE), $p = 0.006$; Δ [HbO₂] = $-3.4 \pm 1.1 \mu\text{Mol}$, $p = 0.009$; Δ [Hb] = $+3.6 \pm 1.6 \mu\text{Mol}$, $p = 0.049$) whereas no significant changes were found in the control sides. After CEA, significant increases in rCBF ($+43.2 \pm 16.9\%$, $p = 0.03$) were found in the surgical sides whereas no improvement in oxygenation were found at both sides. The comparison results demonstrated that the CBF responses to ICA clamping were significantly faster, larger and more sensitive than the EEG responses.

Conclusion: Simultaneous monitoring of CBF, Cerebral oxygenation, and EEG power provides a comprehensive evaluation of cerebral physiological status, thus holding a potential for adoption of acute interventions (e.g. shunting, medications) during CEA to reduce the risks of severe cerebral ischemia and post CEA hyperperfusion syndrome.

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Innovations in Post Operative Pain Management Diane E. Shafer, MD, FICS, FANNOS

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Sara Shafer M.S.

Purpose: The purpose of this paper is to evaluate new and innovative techniques, modalities, and medications to provide post operative pain relief in trauma patients. Many patients who took opioids became too unsteady to ambulate safely. Other pain relieving measures must be utilized. Most patients were injured in the coal mines or motor vehicle accidents.

Method: The methods used to evaluate pain relief in post operative trauma patients were Pain Scales, medication records, patient interviews and chart reviews. Trauma patients often stayed in the hospital's rehabilitation unit which made it easy to evaluate their pain status. Many patients came to the office for further evaluation and pain control.

Results: In a series of 204 patients, all were ordered opioids to reduce their initial post operative pain. Many exhibited somnolence and had difficulty beginning rehabilitation or ambulation. A variety of opioids provided pain relief and yet kept the patient alert to achieve rehabilitation goals. Some patients needed morphine pumps, fentanyl patches, oral or I.M. medications. Many improved with non medication such as Biofeedback, hypnosis, acupuncture, counseling, relaxation techniques, meditation, headphones, and TENS units.

Conclusion: Post Operative Trauma Patients require pain relief. Though opioids produce pain relief in many patients, other medications and modalities will help the patient achieve rehabilitation goals without accompanying somnolence or addiction problems.

The Role of Positron Emission Tomography in the Diagnosis, Staging and Restaging of Pancreatic Lesions.

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Purpose: Despite advancements in imaging and surgical techniques, pancreatic cancer remains as one of the most morbid cancers. Differentiation between inflammation and a neoplasm is a pitfall of the accuracy of positron emission tomography (PET) scans. Impact of blood glucose level and diabetic status on the accuracy of PET is controversial. The threshold value of the standardized uptake value (SUV) for prediction of pancreatic malignancy is unknown.

Methods: A retrospective IRB approved study of 195 patients with an undiagnosed, pancreatic lesion, who had a PET or PET-CT from 2007-2010 was performed. Demographics, body mass index, presenting symptoms, radiologic investigations, tumor markers, pre-scan fasting blood sugar, diabetes status, final pathology, and outcome were recorded. A single nuclear-radiologist blinded to the diagnosis evaluated the scans, and the maximum/mean SUV were recorded. Accuracy of PET or PET-CT for diagnosis, staging and restaging pancreatic cancers was evaluated.

Results: Of 195 patients, 106 were for diagnosis, 19 for staging, and 70 for restaging. Sensitivity and specificity for the diagnosis, staging, and restaging group were 88.7% and 88.6%, 80.8% and 94.4%, 73.3% and 75%, respectively. Presenting symptoms were abdominal pain (56.0%), jaundice (40.8%), and weight loss (20.8%). Average SUV-max for true positives was 9.1, 8.45, and 7.84 in the diagnosis, staging, and restaging groups respectively. Accuracy was not significantly affected by demographics, diabetic status, or glucose level.

Conclusion: PET/PET-CT has excellent accuracy in diagnosing, staging, and restaging patients with pancreatic malignancy. Diabetic status and pre-scan glucose do not affect the accuracy of PET or PET-CT.

Curative Resection of the Pancreas with Major Venous Resection/Repair is a Safe Procedure

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Purpose: To evaluate the safety of combined curative resection (CR) of pancreas and major venous repair in the management of locally advanced pancreatic malignancy.

Methods: In this IRB approved retrospective cohort study, patients who had pancreatic surgery (n=207) between 1998 and 2011 were reviewed. Malignant causes were present in 132 patients, of which 117 underwent CR. Sixteen patients with major vascular involvement (portal vein/superior mesenteric vein) who required vascular resection/repair (G-1) during the CR were compared with 101 patients without vascular involvement (G-2). Demographics, operative and follow-up data were reviewed. Short- and long-term morbidity and mortality were compared between the two groups. Student's t-test, Chi-Square test, Kaplan-Meier method, log-rank test, and Cox-regression analysis were used. P-value <0.05 was considered significant.

Result: 77% (N=90) of patients had adenocarcinoma and 11.1% (N=13) had neuroendocrine tumors. The operations performed were: Whipple (N=50), pylorus sparing Whipple (N=34), distal pancreatectomy (N=18) and total pancreatectomy (N=8). Among resectable cases, 71.8% had R-0 resection and 52.1% had lymph node involvement. The 5 year overall survival (5-Yr-OS) for N0 and N (+) was 38.3% and 24.3% (p<0.05) respectively, and R0 and R1 was 37.9% and 19.5% (p<0.05) respectively. In G-1, venous involvement was excised and either primarily repaired/re-anastomosed (n=11), or repaired using other veins (n=5) or synthetic patch (n=1). The median overall survival was not significantly different between the two groups (P=0.11).

Conclusion: Pancreatic CR should be considered for patients with major venous invasion but without tumor thrombi.

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Upper Extremity Deep Venous Thrombosis and Peripherally Inserted Central Venous Catheters: An Institutional Analysis

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Thomas D. Willson, MD, General Surgery Resident; Todd A. Worley, MD, Attending Surgeon; Matthew J. Blecha, MD, Attending Vascular Surgeon; Mark M. Connolly, MD, Chair - Department of Surgery, Program Director; Francis J. Podbielski, MD, FICS, Research Director

Purpose: Peripherally inserted central catheters (PICCs) are commonly used for patients in need of intermediate- or long-term intravenous therapy. Our study analyzes the risk of upper extremity deep venous thrombosis (UEDVT) in patients with PICCs.

Methods: We performed a retrospective, cohort analysis of all hospitalized adult patients (n=409) in a specialized headache treatment unit who underwent PICC placement at our hospital over a 13-month period. Patients underwent duplex ultrasonography to diagnose UEDVT only if they displayed clinical signs or symptoms. We analyzed all UEDVTs and multiple risk factors to determine if they impacted the risk of UEDVT in patients with PICCs.

Results: The overall incidence of PICC-associated symptomatic UEDVT was 0.49% (n=2) and brachial vein thrombosis was 1.3% (n=5). A total of 3.9% (n=5) of patients receiving ergotamine therapy with PICCs experienced a thrombotic event, while only 1.6% (n=2) of patients with PICCs not receiving ergotamine treatment suffered an upper extremity thrombus. Clopidogrel offered no prophylactic advantage against UEDVT.

Conclusion: Patients with PICCs appear to be at an increased risk for UEDVT when compared to other hospitalized patients. Hospitalized patients with PICCs should receive standard DVT prophylaxis directed at the thrombin-based coagulation cascade.

Results from Changes in Endoscopic Requirements During Surgical Training

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Takewando Murgwisi, BS; and Vijay K. Mittal, MD, FACS.

Flexible endoscopy is increasingly central to the practice of general surgery. Recognizing the increasing role of endoscopy in 1985 ABS recommended a minimum of 29 endoscopy cases to be performed by graduating surgical resident. This number was increased to 85 (including at least 35 EGD and at least 50 colonoscopies) for graduates completing program in June 2009.

A retrospective study was done to see how this new requirement affected the endoscopic performance of residents by looking at the national ACGME data. The ACGME logs for last 20 years from 1990-2010 was reviewed.

From 1990-2008 the average colonoscopies performed by graduating resident ranged from 27-35 scopes with an average of 32. This average number increased dramatically in compliance with ACGME requirement to 61 and 64 for residents graduating in the year 2009 and 2010. From 1990-2008 the average EGD performed by ranged from 19-32 scopes with an average of 25. This

average increased to 33 and 35 for residents graduating in the year 2009 and 2010. There was no similar change in the trends in other endoscopic procedures such as ERCP, bronchoscopies, and cystoscopies for that time period.

When an increased requirement was placed by ACGME, there was proportional increase in the number of colonoscopies and EGD performed by the graduating residents. In the current scenario with an increased requirement of scope numbers for credentialing from hospitals at par with the gastroenterologists, should the ACGME consider increasing the number of scopes requirement? Should there be a role for training in simulators?

Screening in Colorectal Cancer: Are the 'Young' Being Overlooked?

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Neelima Rehil, MD, Sonia Sharma BS, Amir Damadi MD, FACS.

Purpose: Colorectal cancer(CRC) screening has improved survival through early detection. Current guidelines recommend colonoscopy from age 50 to 75. But guidelines for early detection in patients <50 are lacking, although there is an increasing incidence.

Our purpose was to assess the trends of CRC in a community-hospital, determining the adequacy of current-screening and identify risk-factors in those <50.

Methods: Cancer registry data was investigated to identify patients with CRC. Patients were divided depending on age at diagnosis:- <50, 50-75 and >75 years. Charts were reviewed of patients <50, with no family-history.

Results: 3599 patients had CRC treated between January 1982-December 2010. Patients aged <50 increased from 6.8 % to 8.5 %, whereas those between 50-70 years decreased from 45.5% to 43.4%(p=0.03).

187 patients were aged <50 at diagnosis. None of these had screening colonoscopy. Mean age at diagnosis was 43 years.

84% were symptomatic. Symptoms included rectal-bleeding(76.5%), abdominal-pain(58%), altered-bowel-pattern(71%), and weight-loss(27%). Asymptomatic patients were evaluated for anemia(58%), positive-Guaiac-test(33%), positive-abdominal-mass(16%) and positive-rectal-mass(25%).

Majority had stage III(40%) or Stage IV(20%) disease. Four patients had synchronous lesions. Comparatively, in age (50-70 years), 28% had Stage III and 21% had Stage IV.

Conclusions: More patients < 50 are being diagnosed with CRC. 60% of these, in this study had advanced cancer at diagnosis, which could have been potentially prevented by screening colonoscopy. The age group 50-70 years, who are currently eligible for screening colonoscopy, had fewer patients with advanced disease probably reflecting an advantage of screening colonoscopy.

Most patients <50 were symptomatic and this highlights the need for pursuing colonoscopy in these, as the symptoms may be indicative of a CRC.

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Current Trends in Liver Ablation

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Indication and use of liver ablation therapy and modalities have evolved over the past decade. I'll be presenting my personal experience and data from the past 6 years.

Kimura Disease Presented As Recurrent Multiple Extremity Tumors- A Case Report

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Kimura Disease was a rare clinical entity. It mainly manifested as solitary nodules at the cervical region. Majority of the patients with Kimura Disease were male Asians in third decade of life. Head and neck local adenopathies or salivary gland hypertrophy was the common associated finding. Systemic nephrotic syndrome was also common. Kimura Disease presented as recurrent multiple tumors in extremities in a middle-aged Asian male was extremely rare, no previous case were ever reported in the past literature. We encountered a 42 year-old male with multiple tumors over both upper and lower extremities plus a newly grew tumor over his submandibular area. Surgical excision performed and pathology report indicated the tumor to be Kimura Disease. Surgical tumor resections plus regular follow-ups initiated. No sign of nephrotic syndrome ever noticed during the entire treatment and follow-up courses. We are reporting this case for its rarity and its atypical presentations.

Minimizing Complications During Laparoscopic Surgery

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Purpose: Many complications of laparoscopic surgery can be avoided and treated to benefit the patient

Methods: Laparoscopic surgery is widely practiced around the world to do simple and at times complicated abdominal surgeries. Many factors lead to complication during these procedures. These can be categorized in to 4 groups: 1) Patient related , 2) equipment and technology related 3) Surgeon related 4) other factors. This video based talk looks at prevention, minimizing the effects of complications and treatment of common complications that are encountered by the practicing general surgeon.

Results: An organized, team based and stepwise approach will minimize various complications . When complications do occur employing certain reliable techniques and interventions minimizes the bad outcomes and experiences for the patient.

Conclusion: Patient safety and outcomes can be improved in laparoscopic surgery with surgeon and team training, use of protocol and employing reliable techniques.

Bridging the Gap Between International Medicine, Medical Missions, and Advancing Medical Education

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Purpose: To establish awareness of the growing importance for international medicine and culturalization among young physicians and medical students.

Method: A total of 7 medical students and 3 physicians traveled to Guayaquil Ecuador as part of a medical mission bringing both aid and needed supplies to a public hospital within the city, which services over 3 million people. Medical students from America and Guayaquil had the opportunity to work and learn along side one another and share the experience of improving patient's quality of life.

Results: Delivered much needed medical supplies amounting up to \$500,000 and successfully completed over 50 procedures while working along side the local physicians at the hospital of Guayaquil. American students had the chance to experience many different fields of medicine while being supervised by the attending physician while simultaneously learning the differences in culture and its impact on how medicine was practiced. The overwhelming population in Guayaquil along with the lack of supplies and technology leaves physicians with the most basic and raw form of medicine.

Conclusions: This amazing opportunity allowed me to gain invaluable experience as a physician and insight into the vast challenges and differences in how medicine is practiced. Exposure to such meager facilities and experiencing first hand what some people must go through in order to receive treatment for their ailments was a truly humbling and motivating experience.

Mediastinoscopy: Trends and Practice Patterns in the United States

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Sibu P. Saha, MD, MBA, Division of Cardiothoracic Surgery, University of Kentucky

Purpose: Mediastinoscopy is the gold standard to evaluate the presence of mediastinal nodal metastases in patients with lung cancer. This study evaluates the current trends and practice patterns of mediastinoscopy in the United States.

Methods: We interrogated the Society of Thoracic Surgeons National Database for data regarding mediastinoscopy usage, yield and variation by year and region.

Results: Cases with mediastinoscopy as a percentage of all cases performed in the database has decreased from 14.6% in 2006 to 11.4% in 2010 ($p < .001$). Detection of cancer (yield) has remained similar during that period as close to 60% after an initial increase from 56.6% in 2006. In the subset of cases with documented lung cancer, mediastinoscopy decreased from 25.6% in 2006 to 20.7% in 2010 ($p < .001$). Similar decreases are seen in isolated mediastinoscopy and those performed with thoracotomy and resection ($p < .001$). When calculated by medical center, the five-year median rate of mediastinoscopy in lung cancer patients was 15.3% (interquartile range (iqr) 5.2%-31.7%) indicating significant variation among centers. The Western centers in the database had higher

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mediastinoscopy utilization (n=33, median 28.1% [iqr 10.3%-32.4%]) than Southern centers (n=62, median 12.6 [iqr 5.1-27.6]) with Midwestern median center utilization at 13.7% and North-east centers 17.1%. The overall median center rate also decreased over time from 21.4% in 2006 to 10.0% in 2010.

Conclusions: Use of mediastinoscopy has significant regional variability and has declined over time, perhaps due to the increase of minimally-invasive procedures and imaging techniques for the staging of lung cancer.

Evolving Trends in Trauma

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Our understanding of and treatment approach to the severely injured patient continues to grow. The challenges we face are significant. Ongoing shock, hypothermia and coagulopathy represent the lethal triad that is best avoided but when present must be treated aggressively. Fueled in part by recent conflicts, major improvements in resuscitation, diagnostic paradigms and operative strategies are evident. This paper will highlight several noteworthy areas. 1) Damage Control Resuscitation in combination with damage control procedures: 2) Fluid resuscitation and a Lung Protective Strategy: 3) Endovascular repair of Blunt Aortic Injury: 4) Selective Management of GSW's. Surgical principles of hemorrhage control, debridement of devitalized tissue and closure of wounds without tension still provide a solid foundation for care in the current era. Lower crystalloid volumes, whole blood transfusions and component ratios of 1:1:1 (RBC:FFP:Platelets) combined with operative damage control procedures has resulted in salvage rates of 60% and above in select series. A lung protective strategy utilizing low peak inspiratory pressures, low tidal volumes and low mean airway pressures combined with diminished transfusions when possible lowers the risk of ARDS. The utilization of endovascular repair of Blunt Aortic Injury has surpassed open repair in several centers. Although the early data is encouraging, carefully performed long term follow-up is essential. A word of caution about selective management of GSW's is required. Most patients (80%) will require exploration for a GSW to the abdomen. For those patients that are treated non-operatively, failure of this management approach carries with it a significant risk of mortality. Operative intervention for GSW's remains a safe and time tested option. Finally, the problem of interpersonal violence represents a challenging frontier in trauma care. A comprehensive approach to include social support, employment, housing and drug use prevention represents a starting point from which we can build the necessary network to stop the violence.

Autologous Cellular Immunotherapy for Castrate Resistant Metastatic Prostate Cancer

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Purpose: To determine whether sipuleucel-T therapy is an effective alternative to traditional chemotherapeutic treatment for prostate cancer

Method: Sipuleucel-T is the first FDA-approved autologous cellular immunotherapy for metastatic prostate cancer. It is used to treat castrate resistant asymptomatic or minimally symptomatic patients. The procedure involves the activation of the patients

own immune cells (T cell specific) and re-infusion of those activated T cells to treat stage D prostate cancer. Through the utilization of recombinant antigens, sipuleucel-T allows for an individualized response tailored to each patient's tumor. We plan to present our data on our treated patients with the intent of demonstrating the efficacy, safety, and long-term survival benefit of sipuleucel-T in a community based urologic institute.

Results: We have shown a significant survival benefit with less toxicity and a decrease in side effects as compared to traditional chemotherapy.

Conclusion: In conclusion, our data supports sipuleucel-T as an efficacious alternative to traditional prostatic cancer treatments, while providing improved patient tolerance and quality of life.

Aortic Thrombosis Following Appendiceal Perforation

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Vijaya Rao, MD, Francis J Podbielski, MD, FACS, FICS, Matthew J Blecha, MD

Abdominal aortic thrombus is rare in the absence of aneurysm or atherosclerosis. It often presents with sudden onset abdominal pain or distal embolic events. Consensus regarding appropriate treatment of this entity does not exist in the literature. We report the case of a 46-year-old man who presented to our institution with perforated appendicitis for which he initially declined surgery. After undergoing laparotomy for washout, follow-up imaging revealed mural thrombus of the infra-renal abdominal aorta extending into the iliac arteries. Conservative treatment with therapeutic anticoagulation resulted in resolution of the thrombus. This case report illustrates one method of treatment for aortic thrombus and provides an opportunity to briefly review the literature on the subject.

Lung Cancer Screening by Chest Computed Tomography: Findings in an At-Risk Population of Current and Former Smokers

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Jamie L Anderson, PA-C, Jordan Hospital Cancer Center, Plymouth, Massachusetts, Marvin J Lopez, MD, Jordan Hospital Cancer Center, Plymouth, Massachusetts, Francis J Podbielski, MD, FACS, FACS, Associate Professor of Surgery, University of Massachusetts M

Purpose: The causative relationship between smoking and some types of lung cancer has been well documented, yet only a minority of smokers eventually develops lung cancer. Most smoking-induced lung cancers become symptomatic only at an advanced stage, and thus beyond the point of surgical resectability. A reliable and cost-effective screening tool is sought to identify patients at an earlier disease stage so treatment can be initiated with a concomitant improvement in survival.

Methods: This study recruited asymptomatic smokers and former smokers to undergo low dose chest computed tomography in an effort to detect lung lesions. Advertisements were placed in the newspaper, on billboards, online, and distributed throughout the hospital and to primary care physicians. Patient demographic data, smoking history, other relevant medical history was collected to

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ensure that patients met inclusion criteria for the study. Scan results including both lung and incidental findings were collected and discussed with the patient at an outpatient office visit.

Results: A total of 137 patients have been accrued to the study group comprised of 81 (29 men, 52 women). Over 71% of patients had lung nodules found on chest CT scan. Only 11% of nodules were ≤ 10 mm in size, while 58% of patients had multiple nodules. A single patient with multiple nodules had a nodule 10 mm in size. Only one patient to date has biopsy-proven cancer with unresectable stage IIIb disease.

Conclusions: It is clear from these preliminary data that the vast majority of asymptomatic smokers will have some type of abnormal finding on computed tomography of the chest. The majority of patients with positive studies (89%) had nodules < 10 mm, leaving them in an area of questionable PET sensitivity and difficult for percutaneous biopsy. Furthermore, a substantial number of patients had multiple small (2-3 mm) nodules making any type of biopsy procedure difficult.

Current Advances in the Surgical Management of Intractable Epilepsy

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Epilepsy is one of the most common neurologic diseases in the world, and is present in up to 4% of the world's population. In the majority of patients with epilepsy, seizures can be well controlled with appropriate medication. However, current estimates indicate that 20 - 30% of patients with epilepsy are refractory to all forms of medical therapy. These medically intractable patients are candidates for surgical treatment in an attempt to achieve better seizure control. Overall, the single most important determinant of a successful surgical outcome is patient selection. This requires detailed presurgical evaluation to characterize seizure type, frequency, site of onset, psychosocial functioning and degree of disability in order to select the most appropriate treatment from a variety of surgical options. In this presentation, we will outline the essential elements of the presurgical evaluation including non-invasive and invasive techniques such as inpatient monitoring, state-of-art imaging such as SPECT, Functional MRI as well as the diagnostic surgical procedures required for invasive EEG monitoring such as surface electrodes and deep recording electrodes. We will also describe the variety of therapeutic surgical options including indications, techniques, results and complications of each procedure. We will outline also the current innovations in surgical management of epilepsy using intraoperative navigation, intraoperative monitoring, awake craniotomy and functional cortical mapping.

Operative versus Non-operative Management of Traumatic Major Pancreatic Duct Transection; Institutional Experience and Review of the Literature.

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Purpose: To review the literature, report our experience, and compare operative versus non-operative management of patients with major pancreatic duct transection (MPDT) from blunt trauma.

Method: We compare the outcome of 39 patients reported in the literature who had surgical managements (S) with 12 patients who were conservatively managed with combined expectant and image guided percutaneous procedures (PC). We also review the surgical and non-operative management of 7 patients with MPDT treated in the past 12 years at our center. Fisher's exact test, student's t-test, one-way analysis of variance (ANOVA), and Tukey's multiple comparison tests were used for statistical analysis, and P-value < 0.05 was considered significant.

Results: Age at time of injury, complication and fistula formation rates were not significantly different between the two groups. Total Parental Nutrition (TPN) was administered in 10.3% of patients in the S group and 66.7% in the PC group ($p=0.0003$). Subjects in the PC group required longer hospitalization compared with the S group ($p=0.005$).

Conclusion: Both operative and non-operative approaches for management of MPDT from blunt trauma can be entertained successfully with similar complication rates. The management of these patients should be individualized based on their clinical condition.

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