

ICS-US 66<sup>TH</sup> ANNUAL SURGICAL UPDATE  
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# ABSTRACTS

## **Violence Against Women--The Unspoken Crisis**

Jay Bachicha, MD

Violence against women has become increasingly recognized as a significant public health problem. The scope of violence against women is enormous. In this presentation, the demographics of violence against women are presented and data are given to show that this is a significant source of physical and psychological trauma to women in all economic and social groups. Though much of the known data comes from the United States and western Europe, no country in the world escapes the plague of abuse of women by their partners. In view of this fact, domestic violence is presented in international terms.

The primary focus of the presentation is devoted to 1) encouraging health providers to acknowledge that a problem may exist within their patient populations and 2) to describing how an individual physician or other health provider may give support and assistance to a woman who is found to be a victim of violence in the home. Solid guidelines for ensuring the short term safety of the woman will be given and long term goals for her future are outlined. The assistance necessary to reach these goals will be described. Violence against women will be seen to be the unspoken crisis in women's health.

## **Cultural Diversity and its Context in Medicine**

Jay Bachicha, MD

Rapidly changing demographics in the developed world, and especially in the United States, guarantee that physicians will be treating patients who are very different from themselves. The potential variety of cultural, social, ethnic and even sexual variables that each person brings with them to a clinical encounter can have tremendous impact on the successful outcome of that visit and its aftermath. Inept or inadequate consideration of these variables can seriously affect how the patient perceives his or her care, on how compliant that person is with the recommended treatment regimen, and ultimately on the success of the physician's intervention.

The intent of the presentation is to create awareness of cultural diversity in its many aspects and to understand how it may interact with health and wellness. The talk describes the impact of changing demographics on the patient population, presents examples of how the health beliefs and traditions of representative cultures affect the patient-provider interaction, and discusses techniques that physicians can use to assess and improve their cultural awareness. Cultural diversity will be seen to have a significant impact on the work that physicians and other health providers do every day.

## **Avoiding Complications of Laparoscopy--the "Oops" Phenomenon**

Jay Bachicha, MD

Laparoscopy as a surgical technique has enjoyed growing and enduring popularity during the past decade. It has promised less trauma and a quicker recovery time for the patient and new skills for the surgeon. Laparoscopy is a surgical technique that, like others, requires appropriate patient selection and precision. It is commonly held to be a less dangerous, "minor" procedure but this concept is inaccurate. Laparoscopic procedures have their own unique risks and the intent of this talk is to describe how those risks may be anticipated and minimized.

Demographic data regarding laparoscopy complications will be presented and common complications will be discussed, including damage to bladder, ureter and bowel. The importance of recognizing the injury will be noted and medico-legal considerations will be discussed. The goals of the talk are to minimize the "oops" phenomenon and to recognize complications promptly.

## **Laser Resurfacing For The Non-Caucasian Patient**

Gregory G. Caputy, MD, PhD, FICS, AESTHETICA Plastic and Laser Surgery Center, Honolulu, Hawaii, USA

Laser resurfacing has emerged as the treatment of choice for acne scarring, severe facial actinic damage and rhytides. The non-Caucasian patient has been approached with some trepidation due to possible pigmentary changes as a result of this procedure. The author's results with 100 consecutive cases of CO<sub>2</sub> laser resurfacing in Fitzpatrick skin types IV through VII were critically reviewed. All patients had follow-up of over one year and 42 had over two years follow-up. Pre-treatment with a combination of retin-A and 4% hydroquinone was used in all patients and the hydroquinone was restarted 5 days following complete re-epithelialization and used BID until redness completely resolved (normally 3 to 6 months in the majority of patients). Uneven hyperpigmentation often persisted for 3 to 4 months following the procedure but it resolved in all but 3 patients after 6 months. Prolonged healing with areas of mottling was noted in these patients and a new pre-operative assessment system is proposed in order to safeguard from this development in future patients. This system has now been used to assess over 100 patients preoperatively and only one case of hyperpigmentation requiring treatment has occurred during the past two years. Unlike with Caucasian patients, hypopigmentation was not observed.

## **Highway Death Toll/Animal Hazards on North American Roads**

Raymond A. Dieter, Jr., M.D., Lisa Gulliver, Lynn Murawski, PSY Doctorate, Deanna Carlino, R.N., M.S.N., C.T.N.P., Bette Dieter

Since the founding of the United States and the North American continent, roads have increased in number and in potential hazards. Early wild animal attacks occurred to settlers, now high-speed automobiles animal hazards create a significant concern.

### **Purpose:**

A review of the various types of animal hazards that may occur on the highways, both interstate as well as local, would demonstrate the risks and concerns for the driver and the passengers involved in these accidents. The potential for significant injury both surgical and fatal is readily apparent when one reviews the statistics.

### **Methods:**

A review of several thousand miles of driving and of the literature regarding automobile animal accidents was carried out. The number of dead animals and birds encountered was tabulated as well as the literature findings.

### **Conclusions:**

In a personal review 3,370 dead animals and birds were counted while traveling. Of these 480 were identified as potentially accident-inducing safety concerns due to size and odor. The nearly one million large animal (deer, moose, elk, cow) accident incidents demonstrate the potential concern and loss of life per year.

## **Moose/Vehicle Accidents-A Highway Health Concern**

Raymond A. Dieter, Jr., M.D., Raymond A. Dieter III, M.D, David L. Dieter JD, Robert S. Dieter, M.D.

Large animals are indigenous throughout North America. The deer, moose, elk and buffalo and others range freely across the continent and may weigh nearly a ton in some cases.

### **Problem:**

The moose roam the highway areas the year round and their presence certainly creates a significant hazard to one's health. A review of the subject with particular reference to the northern United States and Canadian provinces has been carried out in order to demonstrate the frequency as well as the risk of these accidents to one's life, and health.

### **Methods:**

Letters were sent to all the northern states in the union with a significant moose population as well as to all provinces in Canada. These letters went to the conservation, insurance and highway, and the wildlife departments.

### **Results:**

Review of these results demonstrates a large number of moose automobile accidents occurring each year in the North American continent. As a result of these accidents, a number of deaths and serious accidents occur as they come through the windshield or strike the front of the automobile because of their weight and long legs-especially in Alaska and Maine.

### **Conclusions:**

When driving in areas where these large mammals occur, one should be particularly cognizant of the potential hazard and follow appropriate suggested guidelines including reduction of speed and avoidance of certain hours driving.

## **Paget's Disease**

Professor Kazem Fathie, MD, FACS, FICS, PhD, Las Vegas, Nevada

**Purpose:** Over 100 years ago, Sir James Paget first recognized "Paget's Disease." Initially, it was named Osteitis Deformans and thought to be due to an infectious process of bone. For years, this disease remained a medical enigma which caused deformities specifically of long bones (mostly among older people). Recognition of this disease was rather incidental and treatment was almost nonexistent.

**Methods:** Recently, specific methods of treatment have revived medical interest in this field. Previously, because of not having any definite treatment, there was no such incentive to make a definite diagnosis of Paget's Disease. However, these new treatments require that Pagetoid patients be recognized at any stage of the disease (especially early) so that treatment may be initiated as soon as possible.

**Results:** Paget's Disease occurs in both sexes, and sometimes familial incidence takes place. Different countries have different incidences of Pagetoid people. The disease may be caused by a slow growing virus. Inclusion bodies have been found in osteoclasts.

**Conclusion:** The administration of Calciman, Myacalcin, Osteocalcin and Cibacalcin are by injection, while administration of the Fosamax and Didronel is oral. Administration of the Pamidronate disodium or Aredia is by intravenous injection and drip.

## **Intra-Operative Handling And Wound Healing Characteristics Of Coated Polyglactin 910 Antibacterial Suture And Coated Polyglactin 910 Suture Over Full Absorption Time In General Pediatric Surgery – An Interim Safety Assessment.**

HR Ford\*, P Jones<sup>†</sup>, K Reblock\*, DL Simpkins<sup>‡</sup>. Children's Hospital, Pittsburgh, PA, USA\*; With Confidence Ltd., Surrey, UK<sup>†</sup>; ETHICON, Inc, Somerville NJ, USA<sup>‡</sup>.

The incidence of surgical site infections (SSI) is 2-3%, amounting to 675,000 post-surgical infections/year. The use of coated polyglactin 910 antibacterial sutures (sutures coated with the antibiotic triclosan) for wound approximation is intended to remove colonization of the suture as a contributor to the SSI equation.

**Purpose:** This open study compared the intra-operative handling, wound healing characteristics, and safety of coated polyglactin 910 antibacterial sutures (AS) with those of a control suture (CS - coated polyglactin 910 sutures) when used to approximate soft tissue wounds in 150 randomized pediatric patients undergoing various general surgical procedures.

**Methods:** Patients were randomized to either AS or CS in a 2:1 ratio. During surgery the surgeon, who was blinded to the suture group, evaluated suture-handling characteristics. Wound healing characteristics were assessed at day 1-2, day 14±2, and day 80±5. This interim report summarizes the results from the first 61 patients to complete the day 14 assessment.

**Results:** 79% of the AS group (N=42) and 68% of the CS group (N=19) had excellent overall suture handling evaluations. Wound healing characteristics were similar for both groups at day 1-2 and 14; infections: 0%; erythema: ≤ 5%; and pain: < 13%, by day 14. Three patients (1 AS, 2 CS) were hospitalized for serious adverse events: pancreatitis (1), hypertensive encephopathy, seizures, fever and neutropenia (1), scheduled chemotherapy (2), and central line infections (2). None of these events were related to the study devices and all resolved. No other adverse events were reported.

**Conclusion:** Our preliminary results suggest that coated polyglactin 910 antibacterial sutures are equivalent to coated polyglactin 910 sutures in intra-operative handling, wound healing characteristics, and safety, for approximation of general surgical wounds in pediatric patients.

## **NERVE BLOCKS: Protocols and Indications**

Richard O. Gershanik, MD, PhD; et al. Amilcar Correa, MD., PhD., Hiram Sanchez MD., PhD.

The current study has been doing in our facility, in which review the protocols in accordance to the nerve blocks, its indications, the CPT codes & related Dx., potential S/E. and assoc. complications, contraindications, the helping options to optimized outcomes as well as to reduce complications.

In this work we analyzed 1st) 3216 nerve blocks in a group of very complicated Pts. (817 Pts.), most of them (88%) with severe chronic pain assoc. with Multiple Joint Pain, F/U during a period of forty two weeks,. most of these Pts. has been poor candidates for corrective surgery or they refused to offered surgery for different reasons, some has been underwent previously to failed surgery, and several nerve blocks to different affected areas, w. multiple and complex anatomic abnormalities. The incidences frequencies, proportional recurrence according areas, which has been necessary to manage the pain to satisfactory levels has been analyzed also as well as the Simplified Developed Techniques.

The nerve blocks is without any doubt a form of anesthetics procedures neglected in most of the areas, but has an incredible as well as important role in the safety and effective pain relief with a large amount of considerable advantages, it is the 3<sup>rd</sup>. most increasing progressive procedures in the treatments of pain MGT. 2<sup>nd</sup> only to pain meds, NSAI , all kind of PT. and to the increasing varieties of alternative medicine.

With our routine incorporation of alternative medicine (acupuncture) previously to procedures, has been provide additional sedation and extended the benefits of the procedures, the help of vasoconstrictors and the use of nutrient has been helping more optimizing and prolonging post analgesia and sympathetic blockade as it was documented in previous presentations and for various authorities.

The pain relief still one of the medicine's highest goal for the most frequent and daily CC, challenge treatments will be keep progressing in the our daily living practice.

## Advances In The Treatment of Severe Joint Pain

By Richard Gershanik, MD, PhD; Amicar Correa, MD., PhD., and Hiram Sanchez, MD., PhD.  
Neurological Neurosurgical Pain Mgt. CENTER

Summary: This has a relative new approach originally applied only to severe Knee joint pain assoc. to OA. In this study performed in our facilities we has been extended this Tx. to additional affected joints. It was analyzed the Tx. provided to 164 patients in a period of six to sixty months, 96% of these group of Pts. completed the Tx. as planned.

Special consideration was taking to: degree of OA, Pain parameter, ROM, job related, sports, injuries, joint overuse, prior surgery and/or arthrocentesis, weight, bone positioning and family Hx.

PREVIOUSLY a complete exam. of the Joint fluid was performed to r/o any kind of infection or content abnormalities.

**Local anesthetic** was given **prior** to the intraarticular injection of Na. Hyluronate to minimize the possible associated discomfort.

**It was not** performed in any infected joint related or skin disease around the injection site. No allergic or anaphylactic reaction has been observed, a substantial relief obtained s/ the 1<sup>st</sup> of 5 recommended dose/s.

**Result:** This treatment is very well indicated for severe joint pain related assoc. with or w/o OA., in Pts. who are not candidate for surgical procedures, or who don't want any surgical major procedure at all, furthermore it is our **consideration** and **conclusion:** that this pain relieving joint fluid therapy, is a non surgical, drug free treatment and it SB a good alternative Tx. before any surgical procedure if the Pt's condition allow to do so.

## **'Giant' Retroperitoneal Bronchogenic Cyst Masquerading As A Choledochal Cyst. Report Of A Case And Review Of The Literature**

Goh BKP, Chan HS, Wong, WK, Dept of General Surgery, Singapore General Hospital, Singapore

**Purpose :** Bronchogenic cysts are relatively rare congenital anomalies of the embryonic foregut and are morphologically expressed as maldevelopments of the respiratory system. They are usually found in the thorax and their occurrence in the retroperitoneum is extremely unusual. A review of the literature revealed less than 30 reported cases of retroperitoneal bronchogenic cysts, almost all of which occurred in the left side near the left suprarenal gland or arose from the body of the pancreas. We report an extremely unusual case of a 'giant' bronchogenic cyst arising from the right retroperitoneal space and radiologically masquerading as a choledochal cyst. To the best of our knowledge, this is the largest reported case of a retroperitoneal bronchogenic cyst.

**Methods :** We report a case and perform a literature review of retroperitoneal bronchogenic cyst.

**Results :** A 29 year old female presented with a 3 week history of a mass in her right hypochondrium. This was confirmed clinically and on CT scan which revealed a 13.0 x 8.0 x 18.9 cm cystic mass situated below the liver in the expected site of the extrahepatic bile ducts. She was diagnosed with a choledochal cyst and underwent surgery which revealed a 20 cm cyst arising from the right retroperitoneal space separate from the extrahepatic ducts. The cyst was excised and histology revealed a bronchogenic cyst.

**Conclusion :** Bronchogenic cyst must be considered in the differential diagnoses of intraabdominal cysts. Treatment consists of complete surgical excision either via open surgery or laparoscopically.

## **Is Early Laparoscopic Appendicectomy Feasible In Children With Acute Appendicitis Presenting With An Appendiceal Mass ? A Prospective Study.**

Goh BKP, Chui CH, Yap TL, Low Y, Lama TK, Alkouder G, Prasad S, Jacobsen AS, Department of Pediatric Surgery, KK Women's and Children's Hospital, Singapore

**Purpose:** The management of an appendiceal mass remains controversial with 2 schools of thought; early surgical intervention versus non-operative management with or without interval appendicectomy. The aim of this prospective study is to determine the role and safety of early laparoscopic appendicectomy (LA) in children with acute appendicitis presenting with an appendiceal mass.

**Methods:** Between May to October 2003, LA was attempted in 88 consecutive pediatric patients with suspected appendicitis including 22 patients who presented with an appendiceal mass. All the operations were performed by the registrar or consultant pediatric surgeon on-duty on the day of patients' admission. The data was collected prospectively and statistical analysis performed using Chi-square and Mann-Whitney U tests.

**Results:** A total of 88 patients with a mean age of  $10 \pm 3$  years (range, 3-16 years) underwent LA for an appendiceal mass (n = 22), simple appendicitis (n = 36), other complicated (gangrenous or perforated) appendicitis (n = 23), and a normal appendix (n = 7). There were 7 conversions to open appendicectomy, 3 of which occurred in patients with an appendiceal mass. There were no perioperative or postoperative mortalities. Morbidity occurred in only one patient who underwent LA for perforated appendicitis. He had prolonged sepsis which resolved after 2 weeks of intravenous antibiotics. None of the patients with an appendiceal mass developed complications. Patients who underwent early LA for an appendiceal mass had a statistically significant ( $p < 0.05$ ) longer operating time (median [interquartile range]: 103 [90-151] vs 87 [71-112] min), prolonged time to ambulation (median [interquartile range] 2.0 [2-2.5] vs 1.0 [1-2] days), increased time to resumption of diet (4 [3-5] vs 2 [2-3] days) and longer postoperative stay (6.0 [5.5-6.5] vs 4.0 [3-5.5] days) compared with patients presenting with appendicitis without mass formation. However, there was no statistical difference in these parameters when LA for an appendiceal mass was compared with LA for other complicated appendicitis (perforated and gangrenous).

**Conclusion:** Although early LA for an appendiceal mass is a technically demanding procedure, it can be performed safely in children with minimal morbidity and mortality. In an era where patients' demand for 'key-hole' surgery is rising, early LA is a safe and viable option in the management of children with an appendiceal mass. It also offers the advantage of avoiding misdiagnoses and the need for a second hospitalization.

## **Local Control Of Solitary Brain Metastases Treated With Linac-Based, Static-Beam, Micromultileaf Stereotactic Radiosurgery**

Isaac Goodrich, MD; Robert Sinha, MD; Vanna M. Dest, APRN, Hospital of Saint Raphael, New Haven, CT, USA

**Purpose:** Stereotactic radiosurgery is an alternative treatment option to surgical resection for select patients with brain metastases. Most reported series have used either the Gamma Knife or cone-based LINAC radiosurgery techniques. Sparse data exist on the use of static-beam, micromultileaf radiosurgery (MLC-SRS) as a competing technology to the more common approaches. The purpose of this study was to evaluate the local control rate in solitary brain metastases utilizing MLC-SRS.

**Methods:** A retrospective review was conducted on all patients treated for solitary brain metastases utilizing MLC-SRS at our institution from 1998-2003. Clinical and radiographic response was obtained from chart review and/or telephone follow-up with referring physicians.

**Results:** From October 1998 through June 2003, a total of 34 patients were treated for solitary brain metastases utilizing MLC-SRS. Twenty-eight of 34 patients (82%) received whole brain irradiation in addition to MLC-SRS. Histologic variants included lung cancer (76%), breast cancer (9%), or other (15%). Median follow-up was 9 months (Range 1 to 60 months). Median survival was 9 months (Range 1 to 60 months). Local control was achieved in 30 of 34 patients treated (88.2%). Cause of death was due to extracranial progression in 25 patients (74%) and CNS progression in 2 patients (5.8%).

**Conclusions:** MLC-SRS is an effective modality for the treatment of intracranial metastases. Local control can be achieved in the vast majority of lesions treated and is at least comparable to published data using conventional LINAC radiosurgery techniques, Gamma knife radiosurgery and surgical resection.

## **Ethics in Transplantation**

Prof. Nadey Hakim

If even the procurement of organs from brain-dead cadavers and the transplant of those organs into human recipients is not uniformly accepted as ethical throughout the world, then how much more controversial must be the many other ethical issues associated with transplantation. There is no universally accepted world-wide agreement on use of living donors, use of animal donors, payment for organs, indications for recipient listing, donor suitability, allocation of organs and numerous other issues. Does this lack of agreement mean that transplantation ethics can play no useful role in guiding us through the morass of conflicting claims? On the contrary, the disagreements call out for thoughtful analysis of their ethical implications. However, no single, ethically 'correct' answer will serve all people in all places for all times. The ethical systems of even the most developed countries are continually challenged by transplantation.

## **Capsule Endoscopy**

Mahesh C. Karamchandani M.D., F.A.C.S., F.A.S.C.R.S., F.I.C.S., Battle Creek Mi 49017

Most recent advancement in the field of endoscopy was approved by FDA in summer of 2001. Diagnostic capability of M2A capsule was studied in patients who previously had undergone extensive negative workup.

Forty-six patients underwent Capsule Endoscopy from January to December 2003. 39 were performed for Anemia and Gastrointestinal Bleeding, 2 for Abdominal pain and Anemia, 5 for unexplained Abdominal Pain. All patients with Gastrointestinal bleeding had previously undergone esophagogastroduodenoscopy, colonoscopy, and small bowel study.

Active bleeding was noted in 7 patients, 1 or more non bleeding Arteriovenous malformations were seen in 12 patients and Crohn's disease was diagnosed in 2 patients. Patients with active bleeding and arteriovenous malformations underwent either provocative arteriogram or intraoperative enteroscopy followed by bowel resection.

M2A capsule has proven to be a valuable non invasive tool in the diagnosis and management of a variety of small intestinal disorders. The indications at this time are limited to imaging only. However future changes in technology may expand capabilities that may include mucosal biopsy, Fluid sampling, navigated movement and possibly pathology site labeling.

Author will also discuss structure of capsule, indications, contraindications, patient preparation and procedure in detail. Case reports and video segments will be shown.

## **Surgical Training In The New Millennium**

Vijay K. Mittal, M.D., Providence Hospital and Medical Centers, Southfield, Michigan, USA

A surgeon's training consists of basic sciences, cognitive and technical skills, development of clinical knowledge and maturity, and acquisition of surgical judgment. Graduate medical education is a regulated system with very strict criteria and requirements by various agencies involved in the surgical training as compared to surgical training in developing countries where it is a preceptorship with varying duration of training anywhere from five to seven years or more.

During training residents are provided opportunities for a wide exposure into the fundamentals of basic sciences as applied to the clinical surgery. In addition, preoperative, operative and postoperative care for the patient in all areas of general surgery and its specialties are stressed. The goal of surgical training is to prepare the resident to function as a qualified practitioner of surgery at the high level of performance expected of a board certified specialist. Surgical training also consists of continuity of care and its six components including preoperative examination, diagnostic evaluation, preoperative management, operative procedures, intraoperative management, postoperative care, and long-term follow-up. In the United States the ACGME, RRC, specialty boards, and JCAHO regulate medical education. The programs in the United States providing surgical education are approved by these agencies at regular intervals. The institution providing the surgical education is also supposed to have other medical educational programs and is required to fulfill the criteria established by the above agencies. Surgical training is five years duration in the United States that includes three and a half years of clinical general surgery and its nine essential components followed by six months of non-surgical clinical training and one year of chief year in surgical residency. The Residency Review Committee approves the number of the residents in any program at regular intervals including general surgical training and specialty surgical training for specialties such as plastic surgery, cardiothoracic surgery, orthopedic surgery, urology and neurosurgery. The American Board of Surgery Certification measures surgical training outcome. Recently in the United States the ACGME has introduced the general competencies for medical education that will be applied to all specialties in medicine including surgery. These six general competencies will be documented, measured and evaluated at the time of the individual program review. The surgical training has been transformed in the last decade by the introduction of various technological improvements including imaging procedures, minimal access surgery, endoscopic surgery, capsule-based therapies, information technology, and computer-assisted surgeries. In the coming century the requirement of surgical training will need a universal coverage, safe and affective patient care, centralized timely and efficient and equitable care, and the prevention and population-based health care.

## **Biological Materials: Do They Last To Address The Degenerative (Metabolic) Aspect of Abdominal Wall Hernias?**

Enrico Nicolo, MD, FICS, FACS, University of Pittsburgh Medical Center, Pittsburgh, PA

Hernia is not just an accident, a mechanical lesion, but also a disease, a pathological state. New naturally occurring biomaterials are available today for hernia repair. This tissue engineered graft, naturally occurring cell growth support material, provides a conducive environment for normal cellular growth, differentiation and angiogenesis which is necessary for rapid integration with host for long term viability. Upon implantation, this material elicits a host tissue response that initiates angiogenesis, encourages tissue disposition, and culminates in restoration of structure and function specific to the grafted site. The implants are completely replaced by host tissue in a well organized, smooth, dense collagenous tissue, and well incorporated into the adjacent fascia and muscle fiber bundles. The preliminary clinical results demonstrate this new naturally occurring biomaterial not only helps to repair the anatomical defect of the hernia, but also reconstitutes the elasticity and the physiology of the anterior abdominal wall, for short and possibly long term good results.

## **The Incidence Of Hernias After Liver Transplantation**

J. Ortiz, O. Martinez, R. Zaki, S. Pungpaong, D. Reich, C. Manzarbeitia, Albert Einstein Medical Center, AEHN, Philadelphia, PA

**Purpose:** Liver transplant (LT) recipients may be at particularly high risk for hernias due to malnutrition, ascites, diabetes and immunosuppression. The patients are also susceptible to umbilical and inguinal hernias. In a retrospective manner, we analyzed the incidence of incisional, umbilical and inguinal hernias and their risk factors in LT recipients.

**Methods:** 254 patients had LT between April 1996 and April 2002 with a survival of more than 6 months. The patients were divided into 2 groups: Group I, patients with hernia (n=54) and Group II, without hernia (n=200). A retrospective analysis based on Medical Records and our LT Database reviewed clinical data, BMI, underlying liver disease and MELD score. All LT were performed through a bilateral subcostal incision with or without upper midline extension. Statistical analysis was done using Fischer's exact test and frequency data analyzed by Mann-Whitney rank sum test.

**Results:** 21.3% of the transplanted patients experienced a hernia. Risk factors were prior hernia (p=0.002), a low serum albumin (p=0.001), low platelet count (p<0.001) after the LT, wound infection (p=0.002) and previous use of alcohol (p=0.004). 54 patients had 63 hernias. Recurrence was seen in 6 cases, 5 of these incisional (13%). 27 hernias have been repaired; prosthetic hernia repair was performed in 16 cases total, 13 cases for incisional hernias.

**Conclusions:** Incisional hernias are the most frequent hernia after LT with a high recurrence rate. History of previous abdominal hernia, a low albumin, low platelet count and wound infection after LT are risk factors.

## **Arthroscopic Treatment Of The Pigmented Villo Nodular Synovitis Of The Knee.**

Alfonso E. Pino M.D., F.I.C.S., F.A.A.N.O.S. , Jose G. Ramon M.D., F.I.C.S., F.A.A.N.O.S.

The etiology of this disease is unknown. The incidence is very low. It has been reported as 1.8 cases per million persons per year. The majority of the reports considers P.V.N.S. a benign disease. Almost always the condition is mono articular. The grade of recurrence in the medical literature varies from 0 % up to 46%.

Jaffe, Liechtenstein and Suttro in 1941 used the name of Pigmented Villo Nodular Synovitis (P.V.N.S.), to incorporate in a single definition a complex syndrome involving several manifestations in the musculo skeletal system. In the pre arthroscopic era the treatment was an open synovectomy of the knee. The first publications of the arthroscopic treatment of the P.V.N.S of the knee are back in 1967 in Atlas Arthroscopy by Watanabe, Takeda. The use of the Magnetic Resonance Imaging (M.R.I.) can be useful making the diagnosis earlier before surgery.

The data obtained for preparation of this report was collected from a series of 1695 arthroscopies of the knee and more than 200 arthroscopies of other joints. Only in the knee this disease was encountered. The age average was 64 years. One male and two females patients. Average surgical time was 38.3 minutes. No recurrence was reported. Tomiquette control was used in all patients as Electrical Stimulation was used for adjunct in pain control. T.E.D. socks were used and Aspirin for anticoagulant prevention. No cases of thromboembolic phenomenon or sepsis were encountered. At 6 months after arthroscopy in all patients the R.O.M. was equal to the opposite side. A video of the operation is offered in this presentation.

## **Ankle Arthrodesis**

Alfonso E. Pino M.D. Jose G.Ramon M.D. Dennis Graham D.O.

Edward Albert ( 1 ) of Vienna, Austria, in 1879 was the first to describe the ankle arthrodesis. Also in 1882, did a knee arthrodesis. Edward W. Ryerson ( 3 ) from Chicago, in 1923 coined the term triple arthrodesis. In 1948 the concept of transmalleolar approach was introduced by Crawford Adams( 5 }.

More than 30 surgical techniques have been used, fixation with plates, blades, bone graft, artificial bone graft, staples, External Fixators ( Charnley apparatus, Calandruccio frame, EBI, etc.), retrograde nails (Trifin nails, Retrograde intramedullary locking nails, Steinmann's pins, Etc.) Cannulated screws and last but not least arthroscopic assisted arthrodesis of the ankle etc.

Indications for ankle arthrodesis are: incapacitating pain, not relieved by conservative measures. Candidates for ankle arthrodesis include: Osteoarthritis primary or secondary to fractures and dislocations, Rheumatoid Arthritis, Osteonecrosis of the Talus, Failed Total Ankle Replacement, Failed

Arthrodesis, etc. Sixty percent of patients with intrarticular fractures of the ankle developed post traumatic arthritis requiring ankle fusion. Failure rates vary from 5 % to a 37 %. After ankle fusions are frequent osteosthritic changes at the sub- talar and mid-tarsal joints. The positioning of the ankle arthrodesis is critical in the outcome.

We will describe here our surgical technique, complications and results in a limited number of patients.

## **Malnutrition In The Surgical Patient**

Roque J. Ramirez, MD, FICS, FABHP; SurgeonOne, Inc., Corpus Christi, Texas

**Purpose:** Protein-calorie malnutrition contributes to surgical morbidity and affects 30 to 50% of hospitalized patients. Whether due to chronic illness, major trauma, cancer or obesity, serum prealbumin and albumin measurements are effective screening tools of nutritional status. To determine the effect of a prealbumin-based nutritional screening protocol at our institution and implement a proactive surgical approach to patient management, a retrospective case study was performed.

**Methods:** Electronic records of 23,585 inpatient admissions between 1997 and 2003 in a 64-bed Texas community hospital were reviewed. 4,479 patients enrolled in the protocol with automatic inclusions of patients over 55 years; albumin levels < 3.0 g/dl; weight loss > 10-20% within a 3-6 month period; and major surgery or chronic illness. Serum prealbumin <10, 10-13, or 14-17 mg/dl defined patients as High, Moderate or Mild risk for developing malnutrition or associated complications, respectively. Albumin levels were reviewed in 15,013 inpatients. 6,323 surgical patients assessed. Body mass index (BMI) was calculated in all patients.

**Results:** More than 60% of all patients were overweight or obese by BMI stratification. Prealbumin levels at admission indicated that two-thirds inpatients were moderate to high risk. Sixty-two percent of the patients were hypoalbuminemic, including 28% in the moderate to severe range. No statistical differences were noted between surgical and non-surgical nutritional parameters and no reference can be made to surgical complications.

**Conclusions:** Malnutrition continues to be a predominant trait in our prospective surgical patients and despite effective screening tools, strategies to address the problem pre-operatively are greatly needed.

## **Hand Assisted Laparoscopic Live Donor Nephrectomy Vs. Conventional Laparoscopic Donor Nephrectomy: The University Of Kentucky Experience.**

Hoonbae Jeon, Thomas D. Johnston, Stephen E. Strup, Dinesh Ranjan

Transplant Section, Department of Surgery, University of Kentucky, Lexington, KY

**Background:** Laparoscopic live donor nephrectomy (LDN) has become popular as it has been shown to minimize donor morbidity, length of hospitalization, and length of time to return to work. However, short vascular pedicle and/or multiple vessels are more common with LDN as compared to the older open technique. Hand-assisted laparoscopic donor nephrectomy (HLDN) is a newer method encompassing the advantages of both laparoscopic as well as open donor nephrectomy. We compared our initial experience with HLDN with LDN.

**Patients and methods:** From November 1998 to December 2003, two series of similar patients underwent conventional laparoscopic donor nephrectomy (LDN; n= 71) or hand-assisted laparoscopic donor nephrectomy (HLDN; n=7). Operative time, warm ischemic time, complications, and immediate graft function were compared.

**Results:** Mean duration of surgery and warm ischemic time were significantly longer in LDN group vs HLDN group (206.7 vs. 163.4, and 3 minutes 45 seconds vs. 2 minutes 21 seconds respectively). Two cases in LDN group required open conversion after failed laparoscopic approach (3%). Three cases in LDN group showed delayed graft function (4%). Three cases of patients in LDN group developed thrombosis of the graft renal artery (4%). There was no intraoperative complication in HLDN group. There were no ureteral complication in either group. Most remarkably, there was a significantly higher satisfaction with the quality of the graft received by the recipient team in HLDN vs LDN.

**Conclusion:** In our preliminary experience, hand-assisted laparoscopic live donor nephrectomy provides shorter operative, warm ischemic times and better recipient surgeon satisfaction without a significant increase in donor morbidity.

## **Revascularization of the Heart: Present and Future**

Arno A. Roscher, MD, FICS, ICS World Governor, Los Angeles, CA

Revascularization of the heart was initially done by Vinberg at Mc Quill University using the internal mammary artery transplant into the left cardiac ventricle myocardium. The procedure was associated with a high degree of thrombosis and there for soon discarded. Although Rene Favaloro from the Cleveland Clinic, is credited with inventing the reverse vein transplant in 1967, the actual first successful aorto-coronary bypass procedure, using the reverse vein transplant was done by DeBakey in 1965 and reported in 1972 at the 5<sup>th</sup> Western Hemisphere Congress. He applied this technique to substitute left anterior descending coronary artery (LAD) occasioned by a difficult congenital cardiac repair procedure in a young adult female patient.

This graft was shown to be patent at this 1972 World Congress in San Diego. This procedure became the gold standard for the ensuing decades and was primarily accelerated by Denton Cooley and associates all over the world. The vein transplants, both recent and older, became associated with host various complications, for instance—Thrombosis, Suture Granuloma, and SFH( Subitimal Fibrous Hyperplasia), as an adjustment phenomenon of the vein graft to altered hemodynamics. SFH, however stabilized and maintained patancy for many years, until complicated by ensuing atherosclerosis, forming soft and hard plaques and ultimate trombotic occlusion and failure of the graft. This complication led in the mid-eighties to an epidemic of re-do operations.

Additional long term successful bypass procedures include the LIMA and RIMA methods, Grunztic's Nobel innovation of balloon angioplasty, revolutionized cardiac revascularization further and leading initially to a sign cant drop of bypass surgeries. The angioplasties matched in the mid eighties approximately 750,000(A.C.) cardiac surgeries. Balloon angioplasty were amplified by atheromectomy and exemer laser angioplasty. Challenging methods to improve cardiac oxygenation in patients however not benefiting from (A.C.) bypass surgeries, included (TLA) Transmural Laser Angioplasty and Trpezius muscle epicardio transplants were only transient. Significant improvement of cardiac oxygenation was achieved by introduction of stents of various designs, plain and medicinally coated stents to preclude thrombosis. To improve patency further, beta irradiated stents were introduced to minimize fibro plastic reaction of the stent-anastomosis interface to maintain patency, considered successful at one half year post implantation.

Long-term data however are not available at this time and therefore final assessment of method is not possible. The most promising stents are the coated ones with the idea of totally disrupting the obstructive fibro muscular proliferation. The substances are numerous, for instance (Sirolimus) are subject to intensive study world wide. The ultimate aim is to eradicate atherosclerosis with diet, drugs and genetic manipulation making surgical intervention obsolete.

## **Management Of Recurrent Anorectal HPV Warts – Up-Date**

Ruiz-Healy F, FICS, Sosa-Gallegos J, FICS, Hernández-Ortega JL, FICS, Castillo-Fierro A, FICS, Service of Colo-Proctology. Service of General Surgery, Centro Hospitalario “Sanatorio Durango”. Mexico City, México.

**POURPOSE:** Human Papillomavirus (HPV) in the anorectal region is a frequent disease, with malignant potential, limited therapeutic options and a recurrence rate of over 50 %.

**MEHODS:** A literature research was performed on Medline from 1995 to the present day. Causes of recurrence and current therapy for recurrent anorectal HPV were reviewed. Treatments including topical agents, surgical, antiviral, immunological and new investigations were analyzed.

**RESULTS:** Anogenital condylomata, strongly linked to HPV 6 and HPV 11, are usually related to sexual behavior. Immunosuppression is the most likely important risk factor for the progression and recurrence of anorectal HPV. To this date, effective therapy is not available. Podophyllin and acids (bichloroacetic and trichloroacetic) are the first line of therapy for minor and localized lesions. 5-fluorouracil (5-FU) has an effective rate in around 60% of patients. Larger lesions usually require surgical excision and/or fulguration. Intralesional interferon may be a useful adjunct to surgery and reduce recurrence. New treatments are reported with CO2 laser. Several pharmacologic approaches are being used to stimulate immunologic response. New antiviral agents are under investigation. Radiation therapy is reported in the management of giant perianal condylomata. Vaccines up to date, have demonstrated immunogenicity, but no efficacy.

**CONCLUSIONS:** Anorectal Human Papillomavirus (HPV) is strongly linked as a sexually transmitted disease. Therapy is difficult and recurrence is a common problem. The immune status of the patient is an important factor to always be taken into consideration. Management includes topical agents, immunomodulatory therapy, fulguration, CO2 laser, excision and radiotherapy. Multi-option treatments are being considered.

## MULTICENTER STUDY OF PERCUTANEOUS ENDOSCOPIC DISCECTOMY

Martin H. Savitz, MD PhD FACS FICS FRCS FAANOS

**Objective:** The purpose of the present study was to gather statistics from a comprehensive series of percutaneous endoscopic discectomies to accurately assess the overall incidence of complications and morbidity, to determine the rate of reoperation, and to adjudicate the current role and efficacy of minimally invasive surgery in the armamentarium of a spinal surgeon.

**Materials and Methods:** Twenty-two spinal surgeons at 20 centers of minimally invasive spinal surgery around the world were contacted, and the statistics for 30,000 operations were gathered and analyzed. The type of endoscope varied; and methods of tissue modulation included radiofrequency, laser, and bipolar. The operative approaches are discussed, and a sampling of intraoperative photomicrographs is presented.

**Results:** The incidence of serious surgical complications— such as discitis, wound infection, transient cerebrospinal fluid leak, motor or sensory loss, and dysesthesia— was less than 1% in each individual series. The rate of recorded reoperation for the entire series was less than 1%. Patient satisfaction was over 90% due to same-day scheduling, small incision, short recuperation, minimal anesthesia, lower pain medication requirement, and early return to work.

**Conclusion:** Percutaneous endoscopic discectomy has become a significant alternative to open laminotomy/discectomy for herniated discs that are contained, protruding, prolapsed, or extruded.

## **Hip Muscular Relationships: An SEMG View Of Muscular Agonism & Antagonism In Health And Disease**

Gabriel E. Sella, MD, MPH, MSc, PhD (HC), Adjunct Associate Professor, West Virginia University, Morgantown, WV, USA

### **PURPOSE:**

Objective demonstration of the hip intermuscular relationships through the range of motion (ROM) in asymptomatic adults. The secondary purpose is that of rehabilitating the hip muscles of symptomatic individuals to reacquire similar electrical activity properties and agonist/antagonist relationships.

### **METHODS:**

Eight distinct hip muscles were tested with SEMG. A number of 284 discrete muscles were tested through rest and activity during six segments of hip ROM. The SEMG data (amplitude potentials) were compiled for statistical purposes including the calculation of the actual activity and resting potentials through the ROM for each muscle as well as regression analysis statistics for intermuscular relationships.

### **RESULTS:**

Eight hip muscles SEMG results ( $\mu\text{V}$  RMS) were compiled in four tables and two charts. The tables represent the following: (1) ranking of the muscles in terms of activity through the segmental motions, (2) correlation coefficients among the eight muscles tested. The charts show the ranking of the pattern of the amplitude potentials for the eight muscles and six motions and the ranking of the energy utilization per muscle in motion.

### **CONCLUSIONS:**

Eight hip muscles were tested through six hip segmental motions with SEMG. The amplitude potentials pattern allowed for a ranking of the muscles & motions as well as for intermuscular correlation coefficients representative of muscular agonism and antagonism. The data can be utilized in the clinical field within the surgical and rehabilitative perspectives to document the electrical activity of the given hip muscles and normalize it through the surgical and/or rehabilitative procedure.

## **Our Experience With Solvent-Dehydrated Cadaveric Dermis For Pubovaginal Sling Surgery**

Ajay Singla, Rahmi Onur, Wayne State University, Department of Urology, Detroit, 48201, MI

**Purpose.** To describe our experience with the use of solvent-dehydrated cadaveric dermis in pubovaginal sling surgery for the treatment of stress urinary incontinence (SUI).

**Methods.** Twenty-five women with type III and Type II/III SUI underwent allograft dermis pubovaginal slings. Preoperatively, all patients were evaluated by a detailed urogynecological evaluation, voiding diary, pelvic examination and urodynamic investigation. Graft material as a sling was 2 x 12 cm solvent-dehydrated cadaveric dermis. Of patients with SUI, eight (32%) had significant pelvic organ prolapse and underwent additional pelvic reconstructive surgeries. Outcome was assessed by Urogenital Distress Inventory (UDI-6) short form and a standardized follow-up incontinence and treatment satisfaction questionnaires.

**Results.** Twenty (80%) patients were cured of stress incontinence symptoms with 17 wearing no pad and 3 reported occasional stress urinary incontinence and used 0 or 1 pad with a mean follow-up of 12 months. Five (20%) patients in our series experienced same amount of leakage as before the surgery. Mean day of hospital stay was 1.8 days (range 1-4). Seventy-six percent of the patients indicated that urinary incontinence was no longer negatively affecting their daily life and satisfied the procedure.

**Conclusion.** Early experience suggests that allograft dermis had comparable results to both autologous and allogenic materials. However, larger and comparative prospective studies with long term results and randomized comparison of tissue preparation techniques are warranted.

## **Abdominal Sacrocolpopexy With A New Bone-Anchoring Technique In The Treatment Of Pelvic Organ Prolapse**

Ajay Singla<sup>1</sup>, Gene McNeeley<sup>2</sup> and Susan Hendrix<sup>2</sup>

Wayne State University, Departments of Urology<sup>1</sup> and Obstetrics and Gynecology<sup>2</sup>, Detroit, MI

**Purpose:** The efficacy of a new-bone anchoring method for suspension of the vagina or cervix to the sacrum in the management of severe pelvic organ prolapse was evaluated.

**Methods:** A prospective assessment of 35 consecutive patients undergoing colposuspension with the Straight-In® Sacral Colpopexy System that utilizes titanium bone anchors for placement of permanent non-absorbable sutures and a silicone coated polypropylene mesh. Data on demographic information, associated procedures, and perioperative morbidity were collected. Apical vaginal support was evaluated at the first and subsequent post operative visits and recorded.

**Results:** Colposuspension was performed in 35 women requiring surgical treatment of severe pelvic organ prolapse utilizing the Straight-In® bone anchoring system. Ten women had a previous hysterectomy while 25 had the uterus intact. The vaginal cuff was suspended in 10 women. Obliteration of the cul de sac and anti-incontinence procedures were performed in 30 and 10 patients, respectively. There were no intra-operative complications related to the procedure. Vaginal mesh erosion occurred in one patient 1&1/2 years after placement required exploration and removal. All patients demonstrated excellent apical support with 6 week to 24 month follow up. There have been no recurrences of uterine or vaginal vault prolapse.

**Conclusion:** The Straight-In Sacral Colpopexy System® simplifies suspension of the vagina and cervix to the sacrum. We feel using bone anchors instead of the traditional suture method minimizes the risk of hemorrhage from the sacral plexus. The silicone treated polypropylene mesh excellent support in pelvic reconstruction.

## **Lung Transplantation: Update**

Wickii T. Vigneswaran, MD, FACS, FRCSC, FRCS, FICS, Chief of Thoracic Surgery, Loyola University Medical Center, Maywood, IL

Lung transplantation is an effective treatment for end-stage lung disease. The most common indications for lung transplantation have been chronic obstructive pulmonary disease, antitrypsin deficiency emphysema, cystic fibrosis, pulmonary fibrosis and primary pulmonary hypertension. However patients with less common diseases including sarcoidosis, lymphangioleiomyomatosis, granulomatous lung diseases, limited broncho-alveolar carcinoma and Eisenmenger's syndrome also benefit from isolated lung transplantation.

The major limitation for lung transplantation is the donor availability. Therefore all patients who would benefit from lung transplantation will not be able to receive one. Certain selection criteria are used to identify the patients among this group who would most benefit from transplantation and who are likely to survive the procedure. These guidelines for selection of patients are generally adopted by all lung transplantation centers with minimal variations.

Patients are offered either single lung or a bilateral lung transplant or a combined heart-lung transplant to replace their native lung. In the pediatric population lobar transplantation from cadaver and living donors had been used successfully.

The outcome following transplantation has been rewarding with over 70% one year survival and around 45%, 5 year survival. Majority of the survivors lead an active life following transplantation. The late attrition is related to complication such as rejection and infection. The major cause of late morbidity and mortality is bronchiolitis obliterance, believed to be the result of chronic rejection.

During the next decade, ongoing clinical and basic research promise even greater understanding of transplantation medicine and surgery with refinement in patient care and outcomes following lung transplantation.

### **Wrong site, Wrong Patient, Wrong Procedure**

Wickii T. Vigneswaran, MD, FACS, FRCSC, FRCS, FICS, Chief of Thoracic Surgery, Loyola University Medical Center, Maywood, IL

Medical errors have a tremendous social and financial impact on the society. When it occurs it is devastating to the patient and physician alike. While professional societies and regulatory bodies continue to address the problem of wrong site, wrong operation and wrong patient surgery and wide spread media attention this remains a significant concern across the nation. Recently Joint Commission on Accreditation of Healthcare Organization has addressed this issue and is developing a universal policy to avoid wrong site, wrong operation and wrong patient surgery. Adherence to the policy will become a requirement for accreditation of the Healthcare organization and will be implemented nationwide in the near future. The presentation will discuss the events, development and the current policies to avoid wrong site, wrong patient and wrong surgery.