

MINIMALLY INVASIVE SURGERY WEEK

SLS • MIRA • SRS JOINT ANNUAL MEETING

UPDATES ABSTRACTS

Thursday, September 6, 1:00pm-1:45pm

Bariatrics Committee: Current Update on Minimally Invasive Bariatric Surgery: What's Hot and What's Not

Collin EM Brathwaite MD FACS

Bariatric Surgery has continued to evolve over the past decade. A key aspect of this evolution has been new procedures and the utility of minimally invasive techniques. In fact, a recent study has shown dramatic reductions in complication rates between 2001 and 2006. This was attributed to the wide adoption of laparoscopic surgery. In addition to the Laparoscopic Roux en Y Gastric Bypass, and the Duodenal Switch, Laparoscopic Adjustable Gastric Band and Laparoscopic Sleeve Gastrectomy have become standard procedures. The Gastric Plication and Jejunal Interposition are two new procedures that are currently being studied. No long term outcomes are available for these procedures and techniques have not yet been standardized. Other procedures currently in clinical trials with mixed results. In addition to laparoscopy, Robotic surgery has gained increased attention and application in recent years. Studies from high volume centers show excellent results.

A major goal of Bariatric Surgery is the reduction and prevention of co-morbid conditions. Perhaps the most perfidious of these co-morbid conditions is Type Two Diabetes Mellitus (DM). Two recently published major studies have addressed the impact of Bariatric Surgery on DM. Bariatric Surgery was found to be superior to standard or intensive medical therapy.

The major challenge for surgeons in the future is to find procedures that are minimally invasive, cost effective and safe and that provide superlative outcomes in terms of correction of co-morbidities.

MIS Continuing Education Committee: MIS Continuing Education: Using Technology to Increase Interdisciplinary Interaction

Elizabeth Buescher MD, M.Ed.

The SIG Committee on Continuing Education is committed to innovative ways to improve physician education after residency and fellowship end, with a special focus on multidisciplinary modalities and new technologies. Through the use of social media, we are on the precipice of new ways to educate physicians and interact with our patients.

We propose to create a video library of operative techniques and surgeries including port placement and surgeries of varying degrees of difficulty. This video library can be used not only by those still in training, but by those in practice in preparation for an advanced case or a multidisciplinary case.

The data in support of surgical simulators is increasing all the time. Increasing, there is a movement to require some level of surgical simulation by hospitals prior to granting privileges and by residency programs prior to graduation. Evidence shows that even a short time away from the operating room can affect one's dexterity in the OR. With improved access to simulation, physicians are most likely to take advantage of it.

We are rapidly approaching the date when all medical records must be electronic. The design of the EMR can help enhance a multidisciplinary approach to patients. In addition, social media may provide a platform for physicians to interact and treat patients.

Endocrine/Solid Organ Committee: The Current State of Laparoscopic Donor Nephrectomy

Edward Chin, MD

Since the first laparoscopic donor nephrectomy (LDN) in 1995 by Ratner, thousands of living donor patients have undergone successful surgery. While open donor nephrectomy is still performed in the United States and worldwide, LDN now accounts for the majority of kidney donor procedures. While large series have demonstrated equivalent graft outcomes and acceptable donor morbidity, LDN remains a technically difficult procedure. Technical aspects of LDN, review of current data, and

innovations including single incision laparoscopic donor nephrectomy will be discussed.

Cancer Surgery (Multi-Surgery) Committee: Laparoscopic Lymphadenectomy for Women with Isolated Lymph Node Recurrence of Gynecologic Malignancies

Joong Sub Choi, MD, PhD

Study Objective: To assess the feasibility and efficacy of laparoscopic lymphadenectomy in patients with isolated lymph node recurrences (ILNR) who underwent initial surgery for gynecologic malignancy.

Design: Retrospective study (Canadian Task Force classification II-3).

Setting: University teaching hospital.

Patients: Six patients with ILNR (one cervical, four ovarian, and one peritoneal) diagnosed between March 2003 and July 2010.

Interventions: Laparoscopic lymphadenectomy

Measurements and Main Results: The median age was 59.5 years (range 24-70) and the median body mass index was 21.7 (range 21.0-24.6). There was no unplanned conversion to laparotomy. The median operating time was 337.5 minutes (range 200-400), median hemoglobin change was 0.9 g/dL (range 0.4-2.6), and median hospital stay was 8.5 days (range 5-19). The median number of harvested lymph nodes was 20 (range 5-27) and those of positive lymph nodes was 4 (range 1-24). One patient had common iliac vein laceration with complete hemostasis achieved by intracorporeal suture. Postoperative lymphedema occurred in one patient and was managed conservatively. All patients were treated with adjuvant chemotherapy following laparoscopic lymphadenectomy.

Conclusions: Laparoscopic lymphadenectomy in patients with an ILNR is feasible and might be an alternative therapeutic strategy.

Abdominal/Pelvic Pain/Adhesions Committee: The Minimally Invasive Treatment and Procedures for Patients with Pelvic Pain and Endometriosis to Reduce Unnecessary Multiple Laparoscopies

Endometriosis/Ovarian/Complex Pelvic Surgery Committee: Part 2: "How, When and When Not to Perform Surgery for Patients with Endometriosis and Chronic Pelvic Pain"

A New Algorithm and Protocol for Treating and Evaluating Patients with Endometriosis and Chronic Pelvic Pain

Maurice Chung, RPh, Charles Koh, MD

Chronic pelvic pain (CPP) is estimated to affect more than 9 million women in the United States. Up to 40% of laparoscopies and 10% to 12% of all hysterectomies are performed for CPP. In addition to lost productivity and decreased quality of life, the diagnosis and treatment of CPP consumes nearly \$3 billion of health care expenditures annually. The management of CPP is challenging due to the numerous possible differential diagnoses and contributing factors associated with this condition. Possible differential diagnoses include endometriosis, endosalpingiosis, pelvic adhesions, ovarian remnant syndrome, interstitial cystitis (IC), adenomyosis and uterine leiomyomas. These conditions may present with similar symptoms, and one or more may exist concomitantly in a given patient. Endometriosis is one of the more prevalent gynecologic diagnoses among women with CPP, affecting more than half of those patients who receive a diagnosis for their CPP. Symptoms include dyspareunia, cyclic peri-menstrual low abdominal pelvic pain, symptom flares after sexual intimacy, and irritative voiding in the case of urinary tract involvement. A definitive diagnosis of endometriosis requires visual confirmation of the lesion during laparoscopy, and histologic confirmation of the presence of both ectopic endometrial glands and stroma. Interstitial cystitis, or pelvic pain of bladder origin, is another disorder that may be associated with CPP.

The cause of IC is unclear, but it is thought to be multifactorial and progressive, involving bladder epithelial dysfunction, mast cell activation, and bladder sensory nerve upregulation. Estimates of the prevalence of IC in the United States range from 10 to 510/100 000 cases. Recent evidence suggests that this condition may, in fact, be much more prevalent than current estimates. The symptoms of IC include urinary urgency/frequency and/or pelvic pain in the absence of urinary tract infec-

tion. Patients may also report dyspareunia and/or cyclic pain in association with the menses. Some patients may present with only urologic symptoms; conversely, uterine, uterine sacral, and bladder/anterior vaginal wall tenderness during a physical examination. Symptoms of CPP had persisted for more than 6 months and included dyspareunia, dysmenorrhea, and low abdominal pelvic pain with or without irritative voiding symptoms, such as urinary frequency, urgency, nocturia, hesitancy, and sensation of incomplete emptying.

The pudendal nerve provides mixed innervations to the bladder, pelvic floor muscles, and genitals. Previous studies have shown that in CPP patients, up to 76% have IC/PBS, 88.5% have pudendal neuralgia, and 69.8% have both. By putting the CPP patient through our alternate algorithm to treat their pelvic pain, we reduced the need for invasive diagnostic laparoscopy. Following intravesical therapy, PNBs should be considered the next line of treatment for those patients without significant relief. PNBs are an effective, minimally invasive treatment option for pudendal neuralgia that may also reduce the symptoms of CPP and IC/PBS.

The causes of Pelvic Pain is multifactorial, and with the most recent studies, as indicated above, a new algorithm is proposed, when surgery is indicated, endometriosis should be eradicated, and surgery should be performed by surgeons with expertise in excisional procedures. See chart below:

The Evil Triplet of Chronic Pelvic Pain Syndrome: Pudendal Neuralgia

Maurice K. Chung M.D., Cherie W. Chung, Jennifer Glance D.O., Rhonda J. Medina M.D., Jackie S. Shriver C.N.P

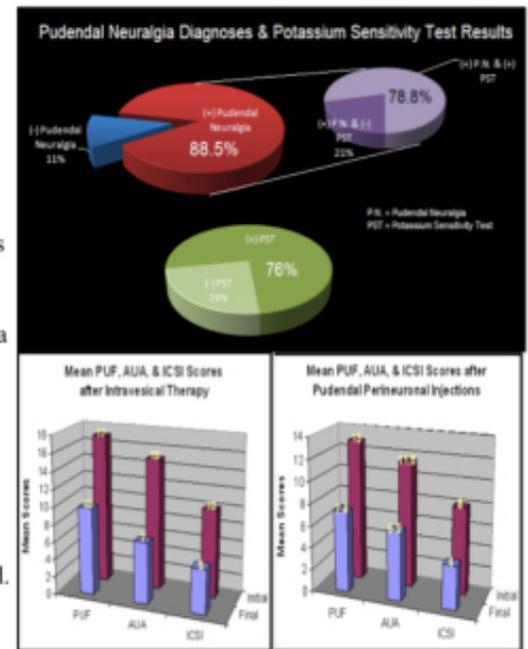


Background: Previous publications have shown that painful bladder syndrome/ interstitial cystitis and endometriosis are the "Evil Twins" of the chronic pelvic pain syndrome.

Objective: To determine the incidence of pudendal neuralgia and painful bladder syndrome in patients with chronic pelvic pain.

Setting: Alliance for Women's Health in Lima, Ohio and Regional Center for Chronic Pelvic Pain and Female Pelvic Medicine at University of Toledo School of Medicine from April 2008 to March 2009.

Prospective cohort study of 96 women that presented with chronic pelvic pain with or without irritable voiding symptoms. All patients exhibited bladder tenderness and negative urinary and genital cultures. Patients completed PUF, AUA, and ICSI questionnaires and underwent potassium sensitivity testing (PST) and clinical evaluations of pudendal neuralgia. The diagnosis of pudendal neuralgia was established by testing for perineodynia through a sensory pinprick test of cutaneous pudendal nerve branches and a pressure sensation test of the pudendal nerve for the "Valleix phenomena." Patients with positive PSTs, indicative of painful bladder syndrome, underwent intravesical therapy. Pudendal perineuronal injections were given as indicated.



Results: The Potassium Sensitivity Test was positive in 73(76%) patients. 85(88.5%) patients had pudendal neuralgia, of which 67(78.8%) had positive potassium sensitivity tests. 33 patients with painful bladder syndrome finished intravesical therapy. Their mean PUF, AUA, and ICSI scores dropped 44%, 54%, and 51% respectively. 13 patients with less than 20% improvement after intravesical therapy were given pudendal perineuronal injections. Their mean PUF, AUA, and ICSI scores dropped an additional 43%, 47%, and 51% respectively.

Conclusion: The significant incidence of pudendal neuralgia (88.5%) in this study suggests that this disease entity and the "Evil Twins" should be at the top of the differential diagnosis for chronic pelvic pain syndrome as the "Evil Triplets."

Colon Committee: Laparoscopic Treatment of Colorectal Disease: An Eight Year Experience with Multidisciplinary Approach

Ignazio Massimo Civello, MD, FACS

The minimally invasive technique, by means of the undoubted advantages of the method, has become fully accepted in the

surgical treatments of the most benign and functional diseases. Today it has been proven that the laparoscopic technique is safely usable also in the surgical treatment of colorectal tumors.

252 patients were treated with laparoscopic colorectal resections between January 1st, 2004 and December 31st, 2011. The surgical indications were neoplastic colorectal lesions in 192 cases and complicated diverticular diseases in 60 patients. Patients with T4 rectal tumors and patients with extraluminal or metastatic colonic tumors were excluded and treated with open surgical approach. The average age of them was 64 years (from 36 to 89 years). 102 patients underwent rectosigmoidal resection, 75 had rectal resection, 35 had right hemicolectomy and 40 had left hemicolectomy. Average operative time: 160.5' (range 80-360). Conversions to open surgery: 15%. Duration of ileus: 3.75 days (range 1-9). Postoperative hospital stay: 8.67 days (range 6-15). Overall postoperative morbidity rate: 16.67%. Ileostomies were performed in low rectal resections. Ileostomy closure: after two months from original intervention.

In the treatment of rectal cancer, after an accurate stadiation, a multidisciplinary approach was applied. In 35 advanced low rectal cancers a neoadjuvant radio-chemotherapy and an intraoperative radiotherapy regimen were successfully applied.

All oncological patients are alive at different follow-up periods (9 months-8 years). In conclusion, laparoscopic colorectal resections show clinically relevant advantages in selected patients. Laparoscopic approach presents a rather steep learning curve. The laparoscopic approach does not seem to entail any oncologic disadvantages.

Cancer Surgery (Multisurgery) Committee: Introduction of a Computer-Based Surgical Platform in the Surgical Care of Patients with Newly Diagnosed Uterine Cancer: Outcomes and Impact on Approach

Mario M. Leitao, MD

Purpose: To assess the introduction of computer-based surgery (ie, robotic surgery [RBT]) in the treatment of patients with newly diagnosed uterine cancer.

Methods: We identified all patients who presented to our institution for initial surgical care of newly diagnosed uterine cancer from 5/1/07–12/31/10. Perioperative outcomes of laparotomy cases were compared to those of laparoscopic (LSC) or RBT cases. Complications within 30 days of surgery were graded.

Results: Of 752 patients, the planned approach was laparotomy in 103 (14%), LSC in 302 (40%), and RBT in 347 (46%). The rate of laparotomy for any reason (planned or converted) was 39% in 2007 compared to 18% in 2010 ($P<0.001$). Preoperative characteristics for LSC and RBT cases were similar, except 15% versus 10%, respectively, were morbidly obese ($P=0.049$). The extent of procedure, total nodal counts, and overall complications were similar between the LSC and RBT cases. The median length of stay was shorter for RBT cases ($P<0.001$). The median total room and operative times were longer for RBT cases ($P<0.001$), mainly due to cases in which the surgeon had less than ~40 RBT cases of experience.

Conclusions: Robotics can be efficiently introduced into the surgical care of patients with newly diagnosed uterine cancers. RBT cases require the same operative times as LSC cases after accounting for the 40-case learning curve. Both approaches result in similar excellent patient outcomes and remain reasonable approaches for this disease. The introduction of robotics may lead to further reduction in the rate of laparotomy.

Hernia Committee: Hernia Surgery Update: From Bassini to Robotics

I. Michael Leitman, M.D.

Every year, more than three-quarter of a million hernia repairs are performed in the United States. Technology continues to evolve that simplify the operation for the patient and surgeon, and allow for improved results. A greater understanding of the epidemiology, biology, and pathogenesis has led to a better understanding on how to tailor an individualized approach. Hernia repairs are now considered part of the dynamic function of the anterior abdominal wall rather than a static closure of a congenital or acquired fascial defect. The technology behind prosthetic and biological mesh has provided an array of options to enhance healing and to maintain normal function with all physical activities. New and novel open and minimally invasive techniques have permitted approaches to the repair of simple and complex abdominal wall problems. Long-term outcome studies continue to provide real data to surgeons who perform these procedures to better inform their patients about the various options and allow for shared decision-making in the selection of the appropriate procedure for their particular

type of hernia.

The history of hernia repair, the development of today's surgical options, and the outcomes of the surgical treatment for a variety of abdominal wall hernias will be presented.

Simulation and Training Committee: Update on the Use of Simulation to Enhance Surgical Residency Education: Program Requirements and New Technology

I. Michael Leitman, M.D.

Simulation has long been an essential component to training in other industries such as aviation and nuclear energy. Over the past decade, there has been explosive growth in the development and adoption of simulation in the training of surgeons, from undergraduate medical education through practice and re-credentialing. Today, the American Board of Surgery requires completion of a simulation course in simulated laparoscopy before being admitted to take the Qualifying Examination. This year, the Accreditation Council for Graduate Medical Education (ACGME) required all surgical residency programs to provide simulation and skills laboratories that address acquisition and maintenance of skills with a competency-based method of evaluation.

It is not adequate for healthcare providers to memorize facts or utilize technologic advances without a practiced approach to critical thinking, developing a proficiency in the latest technology and a working knowledge of the non-biologic determinants of health. According to Erickson, continued deliberate practice is necessary to attain expertise. The practice of surgery has become too complex for efficient learning that relies entirely upon the clinic, hospital and operating room to develop all of skills necessary for practice. Iterative learning with well-defined tasks or objectives, when coupled with detailed and immediate feedback on performance and opportunity to improve by performing same or similar tasks repeatedly is necessary to train the surgeons of tomorrow.

Considerable technology has developed that provides surgeons the tools necessary to develop, improve and measure all of their patient care skills with a variety of simulation trainers that include three dimensional anatomic displays, virtual reality and task trainers, interactive manikins, pre surgical warm-up drills, inter-professional education and team training modules.

Fibroids/Abnormal Bleeding Committee: Challenges of Uterine Fibroids

Liselotte Mettler, Prof Dr Med

A questionnaire with eight questions was sent to our Committee members and received the following answers.

1. Reasons for Laparoscopic enucleation of fibroids: Deep myomas which cause menorrhagia, big myomas with bulking symptoms and myomas encroaching on the endometrial cavity for infertility patients. The reasons are driven by patient's symptoms and complaints. Myomas have to be resected if by chance detected at laparoscopy as they can grow, present bleedings, infertility and pressure symptoms in pregnancy.
2. Which fibroids interact with fertilization? Myomas encroaching on the endometrial cavity, submucosal, intraligamentary and intra-cavitary fibroids as well as fibroids distorting tubes and ovaries.
3. Which fibroids interact with implantation and pregnancy development? With implantation: myomas encroaching on the endometrial cavity, submucosal myomas, intra-cavitary myomas; with pregnancy: possibly all types of myomas.
4. Are there size and location limits for laparoscopic myomectomies? Depending on surgeon's expertise and location of fibroids, if you manage to see and mobilize your instruments.
5. Reasons for enucleation of an intraligamentary fibroids Bulking symptoms, impacting fertilization, distorting adnexa, can narrow the ureter, hindrance of vaginal delivery, growth in pregnancy.
6. Tips and tricks for laparoscopic myoma enucleation Go slow, use vasoconstrictors for local ischemia production, irrigation, stay intracapsular at enucleation, use traction, torsion and counter traction, know your anatomy.
7. Complications of laparoscopic myomectomies, are there any to be really mentioned compared to laparotomy? Not really, however, leiomyomatosis disseminata, lost fibroids, lacerations occurring at morcellation.

8. How does laparoscopic and hysteroscopic myomectomy compare to UAE, MRgFUS and to non-surgical techniques? This is a wide field for discussion but no space in the abstract.

Where is our group heading to in 2012, writing a book? Sharing data for publication? Evaluating techniques? Warn of techniques which are unsafe? Consider new medical modalities as IUD's and progesterone modulators?

Hysterectomy Committee: The Ovaries, the Cervix, and the Tubes: Which to Remove and Which to Save at the Time of Hysterectomy?

Vadim V. Morozov, MD

While hysterectomy remains one of the most common gynecologic surgeries performed in the US, the details of the procedure and the accompanying surgeries continue to generate the intense debate among gynecologic surgeons. With the American Academy of Gynecologic Laparoscopists (AAGL) and ACOG guidelines clearly stating that the route of hysterectomy must be minimally invasive, the questions of the ovaries, the cervix, and the tubes continue to be of importance to patients and gynecologists.

Although it is true that the term "hysterectomy" relates to the removal of the uterus, this surgical procedure is commonly accompanied by others. The debate of the removal of the cervix vs. cervical preservation has been going on for many decades, with pendulum of the decision-making swinging widely from side to side.

Another area of controversy is the removal or preservation of the ovaries at the time of hysterectomy. Multitudes of data have accumulated over many years addressing the issue of surgically-induced menopause, its effect on overall and sexual health, and concerns for potential ovarian and breast cancers.

Yet more recent development on the understating of ovarian/peritoneal cancer and the relationship with the Fallopian tubes have sparked the debates, both in general gynecology and gynecologic oncology communities, regarding the role of salpingectomy at the time of hysterectomy.

This presentation will examine the available literature and current recommendations for total vs. supracervical hysterectomy. The role of the oophorectomy and salpingectomy will be discussed, with relevant recommendations and findings for both *cons* and *pros* reviewed.

Pediatric Surgery Committee: Pediatric Endosurgery 2012: Moving Ahead, or Just Treading Water?

Oliver Muensterer, MD, PhD and Samir Pandya, MD

Pediatric endosurgery was introduced over 2 decades ago. Some procedures have become standard of care, while others are performed only in select centers around the world. Recently, single-incision endosurgery, natural orifice endoscopic surgery, robotics as well as hybrid techniques have been explored. This review describes the current state of pediatric endosurgery and the focuses on

innovations that have taken place over the last few years and addresses the following questions: What novel procedures have emerged in pediatric endosurgery? What are the benefits and risks of these techniques to the patients? Are there geographic hotspots where these innovations are taking place? Our synopsis will also cover the ethical issues of introducing novel operations in children, and how to establish an appropriate inter- and intra-center framework for pediatric endosurgical innovation.

Women in MIS Committee: Contributions of Women to Minimally Invasive Gynecology

Mona E. Orady MD, FACOG

Throughout history, medicine has advanced and been shaped by the contributions of many. Over the last 100 years specifically, the advancement in technology leading more minimally invasive methods of surgery has been exponential, reaching speeds that are difficult to keep up with. In the field of gynecology, starting with simple diagnostic endoscopy then as video endoscopic surgery was developed with many surgeons pushing the limits of the operative techniques; minimally invasive surgery is becoming a standard desired approach for most procedures. Even though men have dominated medicine, especially in the surgical fields, there are many amazing women who have contributed and pushed the progression of the field. As women themselves, who could better advocate for forward-looking and innovative approaches for the care of

women? Over the last several decades, for example, the number of open hysterectomies avoided by minimally invasive treatments and surgical techniques is difficult to quantify. This presentation will review the history and development of the field of Minimally Invasive Gynecology, highlighting specific contributions of both the women behind the scenes, and those women professors and mentors that have inspired young generations of surgeons to push those limits further and further, for the sake of our patients.

Gastroesophageal Reflux Disease Committee: Laparo-Endoscopic Single Site (LESS) Anti-Reflux Surgery

Sharona B. Ross, MD

There have been great advances in laparoscopic surgery for the treatment of GERD. This presentation will detail our journey from conventional laparoscopic fundoplication to Laparo-Endoscopic Single Site (LESS) fundoplication as well as the learning curve of LESS fundoplication. Our experience with 1078 patients, who have been prospectively followed from 1991 to 2011 after their fundoplication, will be reviewed. The outcomes of the first and last 100 patients will be compared. As well, the learning curve of LESS fundoplication will be discussed by comparing the operative times, placement of additional trocars, conversions to “open” operations, and complications among the first 100 patients who underwent LESS fundoplications. Videos will be used for demonstration purposes.

Technology, Innovation & Surgical Standardization Committee: The Standardization of LESS Surgery: Is there a Safe, Easily Adoptable Approach to LESS Operations with Reproducible Outcomes?

Sharona B. Ross, MD

Laparo-Endoscopic Single Site (LESS) surgery represents a paradigm shift in minimally invasive surgery; it improves cosmesis, possibly reduces pain, and shortens recovery time. This presentation discusses the need for standardized approaches to various conventional laparoscopic operations that can be undertaken safely, with at least equivalent outcomes, utilizing the LESS surgical method. The presentation offers standardized approaches with stepwise instructions to two common operations. These methods were developed to promote safety, easy adoptability, along with reproducible outcomes. Videos will be used for demonstration purposes.

Hepato-Biliary Disease & Cholecystectomy Committee: Tips and Tricks to Get Best Results in Laparoscopic Cholecystectomy

Kuldip Singh, M.S, FRCS, FACS

Co-Author: Ranbir Singh, MBBS

Laparoscopic Cholecystectomy in complicated cholecystitis is still a challenge and the conversion rate (2-11%) & Bile duct injury continued to be high because of technical difficulties of dissection in friable, oedematous & chronic fibrotic tissue in different difficult situations. Our aim was to analyse the underlying factors and technical difficulties and to evolve strategies for the successful outcome in difficult situations.

Since 1992, we have operated more than 8000 cases of cholecystectomy in a single centre and 2352 were categorized into difficult cases like: acute cholecystitis, acute and chronic empyema, gangrenous, cirrhotic, mirrzi and having fistulas.

Our policy has been to take up acute cholecystitis within 05days and gangrenous cholecystitis as and when patients are diagnosed. We advocate blunt dissection, cautiously use of cautery, cutting the adhesions rather than pulling and tethering, following anatomical landmarks of dissection beginning from defining the gall bladder embedded in the adhesions, dissection of Hartman pouch, Calot's triangle and finally gall bladder bed dissection in proper plane reproducing conventional cholecystectomy operative steps. The Operative options included sub total cholecystectomy, fundus first method and leaving posterior wall of gall bladder in situ.

In the initial 5-7years the conversion rate and the bile duct injury were 3.7% & 0.13% and in the last nearly 5000cases the conversion rate & bile duct injury has been 1.5% & 0.08%. We conclude that if basic principles of surgery are adhered and one could reproduce the conventional operative steps by laparoscopic technique, will yield best results.

Robotic Surgery Committee: Novel Optimized Telesurgical System with Haptic Sensation

Michael Stark, MD

The New European Surgical Academy

Before the endoscopical era, surgeons used their fingers to palpate and manipulate tissues. When endoscopy and, later, telesurgery were introduced, the use of the fingertips was abandoned and sight became indirect.

To overcome this, a new surgical system has been developed in Europe. This system combines the advantages of laparotomy and endoscopy. Among its features are free approach to the patient, tactile sensing, a high degree of versatility, 3D vision, non-tremor and an eye-tracking system.

In order to assess the validity of this system, experimental preclinical procedures (hysterectomy, salpingo-oophorectomy, myomectomy, partial and radical nephrectomy, total pelvic exenteration and cholecystectomy) were performed.

The parameters examined were:

1. The use of the newly designed handles, surgical arms and instruments
2. Haptic force transmission
3. Ergonomic aspects
4. Safety and reliability
5. The 3D Stereo Vision system
6. Docking time
7. Durability of the re-usable instruments
8. Capability of complex surgical steps
9. Cost-effectiveness

These parameters were found to be superior over traditional endoscopic surgery and existing telesurgical systems.

Detailed reports concerning these parameters as well as the results compared to common endoscopic operations will be presented. This system proved efficient, reliable and useful. Its use and further development promise a simplification of the performance of complex surgical procedures. This system combines the advantages of open surgery and endoscopy, hence its description as a tool bringing about a “renaissance of abdominal surgery”.

Core Competency Committee: Core Competencies Update

Gustavo Stringel, MD, MBA

The six core competencies of Patient Care, Medical Knowledge, Practice-Based Learning and Improvement, Interpersonal and Communication Skills, Professionalism and Systems Based Practice, were endorsed in 1999 by the Accreditation Council of Graduate Medical Education (ACGME) and the American Board of Medical Specialties (ABMS).

These competencies are now an active part of the education of surgical residents. The general competencies were designed to emphasize educational outcome assessments during residency and in the accreditation process. All residents must develop competency in all six areas in order to graduate.

The new emphasis of surgical programs is to graduate surgeons who are competent and who are able to provide quality of care in a safe environment to produce the desired outcomes. It is important for the surgeon, not only to obtain desired outcomes comparable to that of others, but to deliver this care in a confident, empathetic, humane, personal, and respectful manner. The surgeon must also deliver this care in a financially responsible manner. It is especially important for the laparoendoscopic surgeon to be able to work in a technologically advanced environment since many of the procedures performed are technically demanding and equipment dependent.

The American Board of Surgery has incorporated some of the core competencies in the Maintenance of Certification Program (MOC). The new certification process requires Evidence of Professional Standing, Commitment to Lifelong Learning and Self-Assessment, Cognitive Expertise and Evaluation of Performance in Practice.

The surgeon must comply with all these requirements in order to maintain certification by the American Board of Surgery.

Office & Outpatient Laparoscopy Committee: Outpatient Laparoscopic Hysterectomy

Kurian Thott, MD

With the advent of MIS procedures worldwide, technology has allowed us to perform advanced surgical procedures with better patient outcomes and recovery.

This update will be looking at the evolution of MIS procedures in the realm of same day or outpatient surgery, specific to Laparoscopic Hysterectomy. This update will include various options for the surgical staff to incorporate with their patients to aid in getting patients home the same day; from anesthesia to post-op recovery, and even what a surgeon can do intra-op that might allow their patients to go home without increased pain or nausea.

Will also discuss managing patient expectations pre-op and post-op and what they might need to do at home to help with their post-op recovery.

As minimally invasive GYN procedures evolve and patients' expectations increase we as surgical providers should always be challenging ourselves to be looking for new ways to have better outcomes. We should never rest on our laurels on what we do today will always be the best option for our patients tomorrow. Evolution and growth in medicine is an integral part of our journey as MIS surgeons.

Abdominal/Pelvic Pain/Adhesions Committee: Update on Laparoscopy and Robotics in Urology: Where Do We Go from Here?

David Wang, MD

Laparoscopy has become prevalent in urologic surgery. The addition of robotic technology has further allowed urologists to perform more complex urologic operations using minimally invasive techniques. Laparoscopic urologic operations that were previously considered too difficult to be performed by most urologists, such as radical prostatectomy, partial nephrectomy, and radical cystectomy, are becoming routine. In some centers, minimally invasive urologic surgery has virtually replaced traditional open surgery. Laparoscopic and robotic assisted laparoscopic urologic surgery for nearly all urologic operations is an accepted standard.

More recently, laparoscopic single port surgery has expanded into urologic surgery. In addition, recent advances in imaging, including real-time intra-operative imaging and molecular imaging, have further aided the urologist's ability to perform more complex operations with minimally invasive techniques. Future technological advances will continue to further advance the field of minimally invasive urologic surgery.

This session will highlight the current status of laparoscopy and robotics for urologic surgery. In addition, future directions and innovations in minimally invasive urologic surgery will be discussed.

Fertiloscopy/Transvaginal Endoscopy Committee: Last Update in Fertiloscopy: The Operative Fertiloscopy

Antoine A. Watrelot, Prof Dr Med

After nearly a decade of diagnostic fertiloscopy, we are now clearly facing a new development of operative fertiloscopy.

Since transvaginal access is limiting the operative capacities of fertiloscopy, "major" procedures such as treatment of deep endometriosis or myomectomy are clearly out of range.

However many procedures such as adhesiolysis, ablation of small para tubal cysts or treatment of subtle abnormalities are easily feasible through fertiloscopy and the importance of these lesions have been recently emphasized. Therefore results of operative fertiloscopy are fairly good.

Beside ovarian drilling in PCOS patients is now performed in many centres confirming the excellent results allowing to reach 60% of pregnancy rate in 6 months.

Vascular/Thoracic/Cardiac Committee: Minimally Invasive Thoracic Surgery - An Update

Benny Weksler, MD

The last few years have witnessed several advances in the practice of thoracic surgery. Minimally invasive surgery has become standard of care for the treatment of many diseases previously treated by open surgery. The use of the surgical robot increased exponentially.

Pulmonary Surgery:

VATS lobectomy has become widespread and is being used in most academic thoracic programs. VATS lobectomy provides patients with improved short-term outcomes, improved quality of life, and better tolerance to postoperative chemotherapy. Robotic surgery is emerging as a force in the minimally invasive treatment of lung cancer and initial series report encouraging results. It appears that robotic surgery makes the transition from open surgery to minimally invasive surgery easier and allows more surgeons to offer minimally invasive lung surgery.

Esophageal Surgery:

Minimally invasive esophagectomy (MIE) has gained in popularity. A recent randomized trial showed that MIE decreased pulmonary complications and hospital stay when compared to open surgery. A large series of over 1000 patients was reported with a mortality of around 1%. The surgical robot has been used for MIE, and appears to be safe and effective. A European randomized trial is under way comparing robot-assisted MIE to open surgery.

Mediastinal Surgery:

The surgical robot has taken a center stage in the mediastinum. It is apparent the surgical robot offers concrete advantages over traditional minimally invasive techniques and outcomes in myasthenia gravis appear improved with the use of the surgical robot.

[Pelvic Reconstructive Surgery/Stress Incontinence Committee: The Use of Mesh in Pelvic Reconstruction in Light of the FDA Safety Warnings](#)

Jessica Ybanez-Morano, MD, MPH, FACOG, CPE

Background:

There has been several FDA safety advisory that warns of serious risks and complications and questionable benefits of the use of surgical mesh implanted vaginally to treat women for vaginal prolapse.

Objectives:

The review of the FDA warnings and advisory will be highlighted.

The overview and appraisal of the various products available will be examined.

The limitations and contraindications for the use of the mesh products will be delineated.

Methods:

The evaluation will review the FDA safety advisories issued. Furthermore, the outline of the current data and recommendations from the surgical experts and manufacturers will be undertaken. This presentation will emphasize the importance of appropriate patient selection, product limitations and surgical technique education.

Conclusion:

In spite of the FDA safety advisories issued, safe and appropriate use of mesh products in pelvic reconstruction is a feasible option in vaginal surgery.