

Minimally Invasive Surgery Week

MINIMALLY INVASIVE SURGERY WEEK 2013
ANNUAL MEETING & ENDO EXPO
HYATT REGENCY RESTON
RESTON, VA (WASHINGTON DC)

GENERAL SESSIONS

IN ORDER OF PRESENTATION

Thursday 7:40am-8:30am

Best of Update - 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.

Best of Updates: 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.

Best of Updates - 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.

Best of Updates: 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.

Balancing Costs and Revenues of Clinical Minimally Invasive Surgery Care from an International and Multidisciplinary Perspective: A Hospital Manager's Perspective on Minimally Invasive and Robotic Surgery

Volker R. Jacobs, MD, PhD, MBA

Chief Medical Clinic Manager, OB/GYN, Paracelsus Medical University, Salzburg, Austria

Medicine can't be provided in any economic environment without the necessary financial resources. While physicians focus in professional societies on medical aspects and quality of care, they unfortunately often neglect or even ignore at the same time economic aspects which are integral part of performing medical service. Independently from health care's business principles

- maximizing profit to non-profit - financial target from any hospital managers' point of view is at least breaking even on average for actual costs of medical service with its revenues. Essential is that physicians know costs of how providing care and the correlating actual revenues for this care. Both have to be constantly monitored and balanced accordingly to avoid potential losses. Medical service which is permanently underfunded naturally can't be provided at hospital owners' expenses. Despite different reimbursements systems worldwide, cost-coverage calculations are always economically mandatory. Costs for innovative and expensive minimally-invasive techniques have to be fully covered in the revenues to be used cost-efficiently. Use of innovations just for marketing reasons has financial limits because innovations eventually have to prove their pretended advantages for patients and costs. Fashionable or hype of expensive innovations by physicians should be carefully analyzed by hospital managers regarding their medical benefit for patients as well as financial cost-coverage for the provider. Economization in medicine is progressing as we face supranational health care markets. Ethical issues might arise due to occasional limitation of resources for which solutions have to be found on an individual base. Neither all patients can claim being financial exemptions nor result in predominantly providing care at providers' costs. Therefore integration of economic aspects into clinical care by cost-responsible physicians can remarkably improve hospital economics. By regaining economic knowledge and competence and apply resource steering into daily clinical practice, physicians' position will increase within any hospital setting. Economic success by physicians will strengthen their professional position vs. hospital administration and increase their professional freedom.

Economics of Different Mismodalities

An Investor's Perspective on Minimally Invasive and Robotic Surgery

Efrem J. Kamen, BA

While it is clear that the penetration of minimally invasive surgery (MIS) will see increasing adoption, the costs and benefits of the different variations of MIS will continue to come under scrutiny in the changing world of healthcare. From an investor's perspective, we look at the market opportunities, new technologies, relevance and cost efficacy of innovations, particularly in an era of data driven medical procurement decisions. These factors will help shape the future of MIS, and determine the role of laparoscopic surgery, robotics, and all of the technologies that fall in-between.

The Information You Need When and Where You Need It - Scholarly Search and Interactive E Books

Paul Alan Wetter, MD

SLS provides powerful and easy to use resources for surgeons and related personnel, available for free on the Internet at www.SLS.org. This is the only place on the web where you can find out what is being said about an MIS topic at National and International meetings, peer review, index medicus journal, textbooks on surgery and surgical history. Our website includes powerful search features along with text and video that are excellent resources for information to help improve your practice. The Scholarly Laparoscopy Search provides a simple way to search for information and literature on a wide range of laparoscopic and MIS topics. From one place, you can search across many sources using the subset of MIS search topics by specialty. Features of the Scholarly Laparoscopy Search include the ability to search multiple sources from one convenient place, find papers, abstracts, articles, research material and MIS Information, locate complete journal articles from *JSLS*, *Journal of the Society of Laparoendoscopic Surgeons*, learn about key advancements in MIS, and fast one-click search is easy to use. SLS also offers free open access interactive E books and online textbooks for your educational use. This presentation will help you learn how to access all of this information and more.

Techniques of Different Mismodalities Reduced Port Surgery Techniques More Minimally Invasive "My

Port's Smaller Than Yours"

Reduced Port Surgery

Stephanie A. King, MD

As we move minimally invasive surgery forward over the next several years, the questions that have to be asked are not "which" techniques will be used, but how we can incorporate all of the various techniques into our armamentarium, and begin to build the reduced port surgical platform of the future. Although we may strive to do something different and better, we need to be sure that we approach this new Multi-technique platform with a very strict eye on costs and safety.

The field of Reduced Port Surgery has been strategically developed as a process to assist surgeons in their desire to become facile with these new techniques. A "stepwise" approach to improving upon the skills most surgeons already have will help all of us adapt and adopt so we can incorporate the surgery of tomorrow into the practices of today.

Mini laparoscopy, single port access surgery, telemanipulator surgery and NOTES procedures all have their benefits and risks. Drawing from this we can develop the next platform in minimally invasive surgery.

This lecture will be an introduction to the combined approach of these techniques in a stepwise fashion to not only enable the surgeon to adopt these techniques, but to ensure a safe and cost effective transition as they deliver the surgical care of tomorrow, today.

Minilaparoscopy

Steven D. McCarus, MD

Minilaparoscopy continues to be the next evolution in Minimally Invasive Surgery. Data collected from Hysterectomy patients suggest the number, location and size of surgical incisions is very important. (Data of file: McCarus Surgical Specialist for Women. Orlando, Florida). Not only revealing better cosmetic effect, less pain has been noticed. Reduced trocar number and or size can only benefit the patient. This can be seen as a reduction of vascular, pain, viscus, port site tissue seeding and scarring. Stand alone or adjunctive to standard laparoscopic surgery, minilaparscopy has been noticed by the surgical community. Even though technical, clinical and economic questions remain, exciting progress is being made. Surgical offering is contingent upon the technology with minilaparoscopic approach providing significant benefits to patients.

Adding minilaparoscopy as a surgical offering with its indications treating pelvic and abdominal disorders will be discussed. The current state of equipment available with a "playbook" approach as it relates to hysterectomy, appendectomy, adnexectomy, etc. will be reviewed.

Translumenal Surgery

Kevin M. Reavis, MD FACS

Gastrointestinal surgical paradigms have evolved from open to laparoscopic and now to endoscopic approaches to diseases of the foregut. The advances in surgical treatment of esophageal diseases, particularly achalasia using per oral endoscopic myotomy (POEM) over the past 6 years will be discussed. The evolution of this technique as well as the lessons learned along the way will be presented in the setting of where endoscopic surgery is headed and why it is appropriate to invest enthusiasm in this rapidly expanding field.

Outcomes of Different Mismodalities

Inguinal Hernia Repair – Laparoscopic Transperitoneal/Extraperitoneal vs Open; Mesh vs No Mesh; Single Port vs Standard”

Phillip Shadduck, MD FACS

Abstract: The field of hernia surgery is in evolution. There are now numerous approaches to the repair of groin hernias, essentially all of which involve the placement of mesh. More than 80 mesh products are FDA-approved for use in the US. Permanent synthetic mesh products vary in construct, material, coating, pore size, and weight. Absorbable synthetic meshes and biologic products are also available. Established approaches to the repair of groin hernias include open techniques (Lichtenstein tension-free hernioplasty, plug and patch repair, minimally invasive open preperitoneal (Kugel) repair, PHS repair, and sutured repairs) and laparoscopic techniques (transabdominal preperitoneal and totally extraperitoneal). Variations exist for several of these. New variations on laparoscopic inguinal hernia repair include reduced port and single incision surgery. In this brief overview (15 minutes), evidence will be presented for mesh vs non mesh repairs, open vs laparoscopic approaches, and multiport vs single port laparoscopy.

Partial Nephrectomy: Optimal Minimally Invasive Approaches: How, Why and When?

Howard N. Winfield, M.D., FACS, FRCS (c)

Nephron sparing surgery is now recommended for most renal tumors 4 cm or less in size (T1a), as it has been shown to have equal oncologic effectiveness to radical nephrectomy, but has the advantage of decreasing the risk of future renal insufficiency. Prior to the mid 1990's open partial nephrectomy was the gold standard. However due to the pioneering work of a handful of urologist the surgery has transitioned into the laparoscopic and now robotic approaches to this technically challenging procedure. The major drawbacks of the laparoscopic approach relate to the reconstructive aspect of repairing the renal parenchymal defect and working in a 2-dimensional field with somewhat limited ergonomic movements. Robotic surgery overcomes much of the ergonomic limitations, offering 3-dimensional magnified visualization. In order to minimize bleeding during the open partial nephrectomy, the renal hilar vessels were normally occluded with the kidney cooled with ice slush saline. Cooling of the kidney during minimally invasive procedures is technically challenging and most urologists simply clamp the hilar vessels and work under “warm ischemia” parameters. Over the past decade a number of innovative techniques have developed to minimize warm ischemic time and subsequent nephron loss. These techniques include the use of barbed suture (V-Lok) to improve renal parenchymal defect repair, early release of vascular clamping and in select cases “no clamp of hilar vessels” at all. A number of other approaches have been employed such as argon beam coagulation, laser resection and localized radiofrequency ablation.

Due to the improved minimally invasive techniques partial nephrectomy is now performed more frequency thus offering patients improved renal function and quality of life, but without sacrificing oncologic safety.

FRIDAY 7:40am-8:40am

Biomaterials in Minimally Invasive Surgery

The Applications and Complications Associated with Mesh Use in Minimally Invasive Surgery

Raymond J. Lanzafame, M.D., M.B.A., F.A.C.S.

MIS techniques utilize various types and configurations of mesh. The surgeon has a growing array of materials and configurations to choose from for surgical applications. Mesh bioincorporation provides integrity of the repair, reduces potential mesh migration, and influences the risk of short and long term complications. Many complications require

additional intervention, including medical or surgical treatment and hospitalization.

Mechanical mesh fixation can cause local tissue ischemia, nerve entrapment, severe local pain, and could be a nidus for adhesions. Surgical glues can elicit a strong fibrous reaction and intense inflammatory response. Coating the intraperitoneal surface of mesh with tissue adhesives and various materials can influence tissue ingrowth and tensile strength. Covering and attaching mesh to the peritoneal surface with a hydrophilic absorbable material may reduce or eliminate adhesion formation. Major factors contributing to hernia recurrence include insufficient mesh size, inadequate coverage of multiple defects, inadequate mesh fixation, hematoma or seroma formation, folding or twisting of the material, shrinkage of the material over time, and shear forces leading to dislodgement or mesh migration. The most frequent complications reported to the FDA for pelvic organ prolapse procedures include mesh erosion through the vagina, pain, infection, bleeding, dyspareunia, organ perforation, urinary problems, recurrent prolapse, neuromuscular problems, vaginal scarring/shrinkage, and emotional problems.

This presentation will provide an overview of material selection, clinical applications and technical details integral to successful outcomes as well as discussing complications associated with mesh use.

The Use of Mesh in Pelvic Surgery and Pelvic Reconstruction

Maurice K. Chung, RPh, MD

Mesh has been used for pelvic surgery for more than a decade. It has been widely accepted by our General Surgeons Colleagues for the treatment of Abdominal Hernias.

There are advantages for using mesh in Pelvic Surgeries. Mesh is more durable, and is easier to handle, the newly developed mesh did not increase surgical infections. Although there are risks and complications involved in using mesh. It has been staying on the market for more than a decade until the litigation of the mesh kit procedures began to increase in recent years. Even now, there are still a few brands available in the Pelvic Floor procedures.

It began with the type of polypropylene mesh monofilament available to be used as augmented pelvic floor repair, shortly after the Launch of mid urethral sling, Tension Free Vaginal Tape (TVT), in the early 2000's. The TVT was very effective. The use of mesh in urinary incontinence began to spread and increase. TVT is still the current standard for the treatment of urodynamic stress incontinence.

After the advent of the IVS Tunneling device for pelvic prolapse surgery in 2003, multiple different mesh kits started to show up. With the increased in competitive marketing by the companies, thus made the procedures more available for many general Gynecologists who did not receive sufficient training and did not have the experience in pelvic floor surgery. As a result complications increased.

FDA in 2011 issued a statement and soon after, ACOG, AUGS followed and released statements regarding the use of MESH KITS.

There are many complications related to the use of pelvic mesh kits. We, as pelvic surgeons not only should know about the surgical treatment options for the different type of patients but also how to handle the different type of complications. Not any one type of surgery works for all type of patients. We are also expecting to see an increase in the complications from using Robotics and mesh on the Pelvic Floor procedures. This is the similar phenomenon as the mesh kits. We should not let history repeat itself. We all should be cautious about the trend. Institutions should have a tighter standard in granting the privilege and monitor the surgeons

Improve the Outcomes for Six Million Surgical Patients – ORReady

Paul Alan Wetter, MD

Over Two Hundred and Thirty Million Operations are performed worldwide each year. Experts estimate that by following a series of safety guidelines, 2-3 % (roughly Six Million surgical patients around the world) could have better surgical outcomes each year. While this may help only a small number of patients in a small local hospital, cumulatively it has the potential of being beneficial to an enormous number of patients worldwide. Research has confirmed that multiple industries benefit by applying the safety steps presented here. When applied in the operating room, these same steps can and do reduce complication rates and improve outcomes for our patients. Top centers, leading surgeons, nurses and OR teams in multiple specialties have adopted various forms of these steps, and have been reducing error rates by 40% and cutting death rates in half. Regrettably, many hospitals and surgeons worldwide have not yet instituted these good-outcome-producing principles. Our goal is to encourage worldwide use of the *ORReady* Steps in all hospitals within Six Years. Once followed, this could improve the outcomes for 6,000,000 patients worldwide annually