Laparoscopic Urology Update—Year 2002
Sakti Das, MD, FACS

Laparoscopic Training—A Work in Progress for the Urologist
Marelyn Medina, MD

Evolving Techniques in Cardiac Surgery
Francis J. Podbielski, MD, FACS

Painless Laparoscopy?
Larry A. Demco, MD

The Status of Laparoscopic Surgery for Colon Cancer: 2002
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GUIDELINES FOR
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ABOUT THE COVER
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Submit all manuscripts (articles, case studies, review articles, pro reviews, and/or news about SLS) as an e-mail message or attachment.

All submissions should include the address, telephone number, fax number, and e-mail address of the corresponding author.

All material should be prepared in accordance with the American Medical Association Manual of Style with references listed in citation-sequencing format.

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EDITORS NOTE

With the success of the first issue of Laparoscopy and SLS Report distributed to over 70,000, we are pleased to be publishing this second issue. This issue contains added features including product reviews and internet updates.

“The Laparoscopy Web,” one of two new departments, highlights web sites that provide medical professionals with up-to-date scientific information about laparoscopic surgery, invaluable services, and innovative ways to learn; and the “Products for the Laparoscopic Surgeons” section provides a brief overview of products and services used in minimally invasive surgery.

There is also a section on the InterAmerican MultiSpecialty Congress of Laparoscopy and Minimally Invasive Surgery to be held in February 2003. The InterAmerican Congress is designed to bring together surgeons from North, South and Central America, the Caribbean, Spain, and Portugal to provide them with the opportunity to exchange scientific and cultural information.

In this issue are highlights from the 11th International Congress and Endo Expo held in New Orleans in September 2002, including some faculty members’ thoughts. There are also excerpts from some of the best-rated presentations at the September 2002 meeting, including a novel way to improve operating room efficiency and a way to observe the path of the ureters during lower abdominal surgery.

For information about the upcoming 12th International Congress and Endo Expo 2003 to be held in Las Vegas in September 2003 or to submit an abstract, please visit www.sls.org.

We hope to see you in Miami and Las Vegas in 2003.

Paul Alan Wetter, MD

CALENDAR OF EVENTS

February 20-22, 2003
InterAmerican MultiSpecialty Congress of Laparoscopy and Minimally Invasive Surgery
The Alexander All-Suite Oceanfront Resort
Miami Beach, Florida, USA
For more information, visit www.sls.org

April 29-30, 2003
Minimally Invasive Approaches in Surgical Oncology
Madison Hotel Metrodome
Minneapolis, Minnesota, USA
For more information, call (612) 626-7600 or (800) 776-8636

June 16-18, 2003
1st European Endoscopic Surgery Week
Scottish Exhibition and Conference Centre
Glasgow, Scotland, UK
For more information, visit www.eesw.com

September 22-25, 2003
12th International Congress and Endo Expo 2003
Bally’s Las Vegas
Las Vegas, Nevada, USA
For more information, visit www.sls.org

February, 2004
Asian American MultiSpecialty Congress of Laparoscopy and Minimally Invasive Surgery
Honolulu, HI, USA
For more information, visit www.sls.org

September 29-October 2, 2004
13th International Congress and Endo Expo 2004
Sheraton New York Hotel & Towers
New York, New York, USA
For more information, visit www.sls.org

Please submit the date, title, location, and contact information for the Calendar of Events to publications@sls.org.
Evolving Techniques in Cardiac Surgery

Francis J. Podbielski, MD, FACS

The first successful "open heart" surgical procedures were those performed for congenital abnormalities. Blalock and Taussig described a palliative procedure bearing their name for the treatment of cyanotic heart disease in 1945. Dr. John Gibbon performed the first intracardiac operation with the aid of cardiopulmonary bypass in 1953. Coronary revascularization for ischemic heart disease was popularized in the late 1960s. Approaches to each of these types of procedures have changed drastically with the development of new technologies. Within the scope of this review we will discuss the most frequently performed cardiac operations in the United States today, namely adult coronary revascularization and valve replacement or repair.

The gold standard against which new operative techniques are judged is a procedure performed via a full median sternotomy with central cardiopulmonary bypass. After cooling the body and heart via the pump perfusate, the aorta is cross-clamped; and antegrade, hyperkalemic solution (cardioplegia) is used to arrest the heart. This is frequently supplemented with retrograde cardioplegia and topical cold solution to the outer surface of the myocardium. Saphenous vein and/or internal thoracic arterial conduits are used to shunt blood from the ascending aorta to vessel targets on the heart. Valve replacement is accomplished by aortotomy or atriotomy. Upon completion of the bypass, repair, or replacement, the heart and body are rewarmed, the hyperkalemic coronary perfusate washed out, and the heart allowed to slowly resume its function as a pump.

As coronary revascularization became more popular, variations on the sequence of events and cardioplegic components (ie, cross-clamp removal, proximal graft anastomosis, warm vs. cold cardioplegia, blood vs. crystalloid cardioplegia) were each championed by their advocates. With the advent of new pharmacologic agents and monitoring techniques, surgeons began to re-examine the role of cardiopulmonary bypass in performing open-heart operations. One of the first "minimally invasive" techniques to be introduced was mini-
mally invasive direct coronary artery bypass (MIDCAB). In its infancy, MIDCAB entailed a left anterior thoracotomy (usually the 4th interspace), through which the internal thoracic artery could be mobilized from the undersurface of the chest wall. After the pericardium was opened and traction sutures were placed, the heart could be rolled in the field of view and the mid-portion of the left anterior descending artery visualized. Common hand-held instruments were used to stabilize the heart. Bradycardia or intermitent cardiac arrest was achieved pharmacologically and a standard hand-sewn anastomosis performed.

Various vessel occluders, suction devices, and gas delivery systems were tried to maintain a bloodless field during the anastomosis. Currently, there are several commercially available stabilization devices that focally stop virtually all movement of the heart. This coupled with a moisturized gas delivery system enables optimal results. Drawbacks of MIDCAB include a limited number and range of target vessels. Some studies have actually shown increased pain, greater tissue destruction, and an increase in the rate of wound infections with this technique compared to off-pump coronary artery bypass (OPCAB).

OPCAB encompasses a variety of approaches to coronary bypass grafting with one central feature – no cardiopulmonary bypass. In addition to its well-known deleterious effects on blood components and end organ function (ie, liver, pancreas), cardiopulmonary bypass has also been shown to cause long-term cognitive changes. Some investigators have actually shown cardiopulmonary bypass to be an independent risk factor for higher morbidity or mortality. Full sternotomy OPCAB procedures offer virtually the same range of exposure as their on-pump counterparts in light of left main coronary artery disease and poor preoperative left ventricular function. Off-pump techniques are equal in success and safety even in patients requiring emergent procedures and those undergoing concomitant carotid endarterectomy.

Partial sternotomy and lateral thoracotomy approaches have been described with equal success. Thorascopic coronary anastomosis has been proven feasible, but tremor amplification via a long instrument made this technique difficult and time-consuming – until the introduction of robotics. Mechanical dampening (if not complete) ablation of human tremor and added degrees of freedom in motion have been a major breakthrough in the development of totally endoscopic coronary revascularization.

A technique developed in parallel to the surge in robotic technology has been peripheral cardiopulmonary bypass with intracoronal balloon occlusion. Using femoral vascular access, venous and arterial lines are placed. Employing special catheters and cannulae, antegrade cardioplegia can be delivered and cardiac arrest achieved. While occlusion balloon
migration and aortic dissection plagued initial procedures performed with this technique, refinement of the technology and improved patient selection have overcome these issues. The hybrid technique of peripheral cardiopulmonary bypass (if needed) and robotic assistance in performing coronary anastomoses has arrived and awaits acceptance into the mainstream. Centers developing this technique usually begin with isolated left anterior descending (LAD) coronary artery to left internal thoracic artery (LITA) anastomoses with robotic assistance via a median sternotomy until they progress to a total endoscopic operation.

Minimally invasive approaches to aortic or mitral valve operations and other procedures are varied. Total endoscopic atrial septal defect closure is now a reality with excellent results. A popular approach to isolated aortic valve replacement is manubriotomy (upper sternotomy) and standard aortic and atrial cannulation. The entire procedure is performed through the smallest possible incision. Similarly, mitral valve repair or replacement (again with standard cardiopulmonary bypass techniques) can be performed through a small anterior or lateral right thoracotomy. Application of thoracoscopy (and now robotics) to this procedure has increased the level of repair complexity that can be performed. In one of the larger series, over 75% of coronary artery bypass graft (CABG) and mitral valve repair or replacement patients underwent an entirely endoscopic operation with results comparable to standard procedures.

In summary, the tools and technology are in place to inaugurate a new era in cardiac surgery. Acknowledging that no one operation is right for every patient, it remains the responsibility and duty of the surgeon to learn these new techniques so his or her patients can benefit from what others have so long labored to bring to fruition. Forward-thinking, proactive surgeons need to ensure that no subspecialty is left behind in the technology revolution.

This article is a synopsis of Dr Podbielski's presentation at Endo Expo 2002.

Address reprint requests to: Francis J. Podbielski, MD, FACS, 67 Belmont St, Worcester, MA 01605-2657, Telephone: 508 334 8996, Fax: 508 334 6296, E-Mail: Podbiel@ummc.org

Francis J. Podbielski, MD, completed a general surgery residency at Columbus Hospital in Chicago and a cardiothoracic surgery fellowship at the University of Illinois at Chicago. Dr Podbielski is currently an assistant professor of thoracic surgery at the University of Massachusetts Medical Center in Worcester. He is a Fellow of the American College of Chest Physicians and serves as the Chair of the SLS Cardiac Surgery subcommittee. The application of minimally invasive techniques to general and thoracic surgery and the physiologic effects of lung volume reduction surgery on cardiac performance are Dr Podbielski's primary research interests.

References:
1. Blalock A, Taussig H. The surgical treatment of malformation of the heart in which there is pulmonary stenosis or pulmonary atresia. JAMA. 1945;128:189.
5. Calafiore AM, Di Mauro M, Contini M, et al. references continue on page 8


Ten Key Points to Remember in Prevention and Management of Laparoscopic and Endoscopic Surgical Complications

1. All abdominal or pelvic procedures carry an inherent risk of bowel injury irrespective of the use of an open or MIS format.

2. Unsuspected and untreated injuries can result in major morbidity or mortality.

3. The key to management of these potentially life threatening problems must be centered on prevention and the prompt recognition and early treatment of injuries should they occur.

4. Thorough understanding of the anatomy, the use of sound surgical principles and careful technique will prevent many problems.

5. MIS procedures require well-thought-out positioning of patient and trocars, careful use of traction and countertraction, clear visualization of instruments and surrounding structures, and careful use of electro surgical and other devices.

6. Injury management may include suturing, resection, stapling, exteriorization, and conversion to an open procedure.

7. Conversion to an open procedure is always an option.

8. Pneumatic sleeves may be helpful in some circumstances to prevent and to treat bowel injuries.

9. Careful planning, meticulous technique, and attention to detail will prevent or minimize the incidence of bowel-related complications of MIS procedures.

10. A high index of suspicion is prudent for patients with fever, peritonitis, decreasing hematocrit, ileus, or "failure to thrive."

--Raymond J. Lanzafame, MD, MBA
From postgraduate course on Prevention and Management of Laparoscopic and Endoscopic Surgical Complications, Endo Expo 2002, New Orleans

"The use of the robot has the potential to convert surgical procedures that we presently perform by laparotomy to laparoscopy.

The use of present prototypes in surgical procedures that are already performed by laparoscopy may not be cost-effective.

The rapid evolution of robotics assures that they will play a role in the future."

--Tommaso Falcone, MD
Endo Expo 2002, New Orleans
Decreasing Operating Room Inefficiencies in Advanced Laparoscopic Minimally Invasive Surgery

Use of Monitoring Worksheet “Scorecards”

Beverly A. Johnson, RN, BSN, Jacqueline Carey, RN, Christine Hanley, RN, W. Peter Geis, MD

Operating rooms are expensive to utilize, equip, and manage. Patients undergoing complex laparoscopic minimally invasive surgery utilize numerous amounts of highly technical equipment and specific disposable supplies. This process often yields costly surgical procedures. Monitoring of all resources used in conjunction with the sequence of surgical procedures has enabled our operating room to decrease inefficiencies, to eliminate waste, and to collect data to improve our patient care and further improve the process. Recording of key performance perspectives using actual start and end times of case setup, including intubation, positioning, the sequence of surgical events, and the use of disposable supplies provides us a collection of data that allows assessment of each sequential event and implementation of improvements in each sequential event.

Our operating room staff actively provides input into case setups. Concerns and issues occurring during the procedure are recorded and discussed, and solutions are initiated. The staff’s knowledge has increased since they actively provide input into case setups with application to all aspects of surgical procedures. This data is discussed at team meetings and provides an avenue for education of the operating room staff. The staff has experienced an empowerment and accepted a broader range of responsibility. Goals for improving case efficiency are set. Collaboration with other surgeons enables team goals to be reviewed and reinforced. Time frames of procedure outcomes are benchmarked.

The scorecards also provide a mechanism to assist with the choreography of the surgical suite. Since the procedures utilize an abundance of equipment, our preprinted forms provide a time efficient tool to eliminate the guesswork from determining the placement of equipment. Case setup time has averaged a 6-7% time decrease since the use of scorecards. Data collection on “resources used” allows critical discussions regarding further improvement to eliminate wasting of supplies.

Finally, collaborating with other surgeons on the importance of procedural monitoring
## CASE MONITORING WORKSHEET
### LAPAROSCOPIC RIGHT HEMICOLECTOMY

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### PATIENT INFORMATION

### ISSUES / DELAYS / EQUIPMENT / PERSONNEL

### OR SET-UP STRATEGIES

### CR TEAM MEMBERS

**SURGEON(S):**

**ASSISTANT(S):**

**ANESTHETIST:**

**SCRUB TECH:**

**CIRCULATING RN:**

**SALES REPRESENTATIVE:**

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### Implant-Mesh

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### Support Items

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### NOTES

Monitor 1 & 2 = Main scopelitivide view  
Position = Lithotomy in Yellinot:stirups  
Right arm tubed at side  
RP = Robot Pedal  
H = Harmonic Scapel Pedal  
FOLLOW CANCER PROTOCOL

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using a scorecard has fostered a relationship with our surgeons, anesthesiologists, and staff that is positive, productive, and rewarding. With the use of scorecards and good teamwork, operating and supply costs were reduced by 7% in 2001.

This paper is a synopsis from the Best Poster Award at Endo Expo in New Orleans, September 2002.

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The use of scorecards at Saint Peter's University Hospital, New Brunswick, New Jersey began with the appointment of our current Chairman of Surgery; Director of the Minimally Invasive Skills Learning Center, W. Peter Geis, MD, in July 2000. Beverly A. Johnson, RN, BSN, Perioperative Instructor, Christine Hanley, RN, CNOR, Laparoscopic Team Leader and Jacqueline Carey, RN, CCRN, Director of Perioperative Services, spearheaded with Dr. Geis the identifiers on the scorecards. The goal of the scorecard is to monitor the use of appropriate resources, monitor surgical events, and improve patient outcomes. Figures shown are for a right colon resection: top left, front of worksheet; bottom left, back of worksheet; bottom right, room setup worksheet.
Laparoscopy has brought many changes in our approach to surgery, with a gradual movement from the traditional laparotomy approach to surgery within the abdomen to a minimally invasive approach. Although this has affected the doctors, the main benefactor of this technology has been the patient. Postoperative recovery times were reduced from 6 weeks to 1 to 2 weeks with the laparoscopic approach. Although a quantum leap in the postoperative recovery period was recognized, surgery still involved a painful recovery. A laparotomy scar was replaced with a smaller trocar insertion site pain and shoulder pain from laparoscopy. Our next challenge is to see if minimally invasive surgery can be done without postoperative pain.

To achieve the goal of painless laparoscopy, we have to apply some of the techniques used in reducing the pain associated with a laparotomy scar. One of these techniques involves administering nonsteroidal antiinflammatory drugs (NSAIDs) to the patient preoperatively. A 100 mg rectal dose of Indocid, given 2 hours before surgery, is known to block pain transmission at the level of the spinal cord.

The next technique involves blocking the pain sensation at the operative site. Administration of 1% Xylocaine or Marcaine at the proposed incision site, as well as the proposed trocar path, is easily accomplished using the Hulka technique. This involves injection of local anesthetic at the skin, then making the small incision, and injection of the proposed trocar path using a 22 gauge spinal needle at the 3, 6, 9, and 12 o’clock positions.

The last challenge to achieving painless laparoscopy is to deal with the associated shoulder pain. The shoulder tip pain was thought to be due to the reaction of the carbon dioxide gas reacting with the water to form carbonic acid. This in turn irritated the nerves in the diaphragm resulting in shoulder pain. Recent work has determined that this premise was not correct. The actual cause of the shoulder pain is the result of the cellular death caused by the combination of a temperature change from the gas at 21°C and the drying effect of the gas at 0.0002%. Just as the cold dry wind of a Canadian winter causes exposed
The patient is no longer a person to be operated on, but rather a person to be operated with as an equal partner in the operating team.

skin to freeze in less than a minute, the same cold dry gas of laparoscopy kills the peritoneal cells resulting in the shoulder pain. Just as Canadians flock to the warm moist air of Florida to escape the pain of frost bite from the Canadian winter, heating and humidifying the gas during laparoscopy can prevent the cellular death of the peritoneum and result in less shoulder pain. This can be accomplished by using the Insuflow device. This device can be attached to any current insufflator. A chamber is charged with 8 cc of sterile water and is connected between the insufflator and the patient. The chamber heats the gas to 38.5°C (98.5°F) and humidifies the gas to 95% humidity. This will heat and humidify 150 liters of gas and can be recharged if gas volumes greater than 150 liters are required. Without incisional pain and shoulder pain, the patient’s recovery is markedly affected. There is little need for pain medication, and recovery time is shorter.

We are now seeing another quantum leap in the patient’s perception of surgery. From surgery with shoulder and trocar site pain, to trocar site pain prevented by local injection of anesthetics, and shoulder pain prevented by heating and humidifying the gas. The result is far less painful to the point of painless laparoscopy.

This formula for eliminating the pain of laparoscopy under general anesthetic has resulted in a resurgence of performing laparoscopy with the patient awake. Tubal lig-...
THETROCAR.COM, an online videojournal of gynecologic and surgical endoscopy, was first published in May 2001, and it has been gaining a wider audience each month. In addition to providing exceptional visual aids, the videojournal contains up-to-date course and meeting information. Although published in a different format, each article is selected based on the same scientific strictness and thorough statistical analysis as papers published in more traditional journals. New sections of the videojournal include Congress Reports (mostly videos of live surgery) and Tips on Surgical Anatomy. The videojournal also includes editorials, reports and reviews, and an instruments section. For more information, visit www.thetrocar.com.

LAPAROSCOPY.COM is a multimedia on-line database of surgical procedures involving laparoscopy and other minimally invasive techniques. Apart from its high quality pictures and short video clips, this is the only web site that offers a 24-hour live broadcast. Grand rounds, teaching rounds, lectures, and simulated live surgery can be watched from any computer connected to the Internet. Taking advantage of the latest advancements in streaming technology and wireless protocols, these live events can also be accessed via handheld computers. For more information, contact Alex Gandras, MD, webmaster @laparoscopy.com.

SLS.ORG, the web site of the Society of Laparoendoscopic Surgeons, contains information for medical professionals and patients and is one of the most visited sites for laparoscopic surgery. The SLS yellow pages assist medical professionals in networking and allow patients to search for a laparoscopic surgeon by state (in the US) or by region of the world. The yellow pages list members’ specialty, telephone number, e-mail address, and practice web site. The patient information pages also contain educational articles about laparoscopy and endoscopy. To help physicians learn about new technology, the site provides a virtual exhibit hall that contains contact information for many of the leading companies in minimally invasive surgery. For more information, visit www.sls.org.
Over the past year, the percentage of colon surgeries performed laparoscopically has increased yet still remains a small fraction of all large bowel procedures performed. It has been estimated that last year 5% of all colon procedures were performed laparoscopically. This year, industry analysts estimate that 8% are accomplished laparoscopically and 7-9% by hand-assisted laparoscopic technique. Despite an increasing body of literature suggesting an equivalency for cancer surgery, feasibility for resection of benign disease, and an improvement of recovery of physical and GI tract activity with a decreased length of hospital stay, most colon surgery is performed by open technique. The reasons may be multiple, including the technical difficulty of the procedure, the fact that most colon resections are performed for malignancy (and that the results of the large multi-institutional studies are pending), and the lack of demand by the public which, as much as any other factor, drove the rapid availability of laparoscopic cholecystectomy. It will be the eventual findings of the effectiveness of laparoscopic surgery for curative resection of colon cancer that will dictate its acceptance.

Multiple studies of laparoscopic colon cancer surgery have been released this year. Most have not been both randomized and prospective nor had sufficient numbers to reach statistical significance. The follow-up periods for these studies have varied between 3 and 5 years.

A study by Franco-Osario of 140 laparoscopic patients showed 3-year survivals for stages I, II, and III of 3.4%, 92.4% and 77.8% respectively. Bertolino also evaluated 3-year survival for curative resection finding survivals of 100% for stage I and 87.7% and 76% for stage II and III. Feliciotti compared 102 rectal cancer patients having both open and laparoscopic surgery. Survival probability for laparoscopic versus open procedures was 80.9% and 75.6% overall, 79% and 75% for stage II, and 69.2% and 66.7% for stage III. The same group also compared 156 colon cancer patients who underwent either laparoscopic surgery or open procedures at 69 months. The cumulative survival probability was 89.7% for laparoscopic surgery and 86.1% open procedures. Lecoche studied a group of 300 patients, still not enough to reach statistical significance; however, there was a trend toward a survival advantage for laparoscopic surgery (cumulative survival probability of 93.4% for laparoscopic versus 86% for open
procedures). Lujon’s study\(^7\) of 102 patients, however, compared their results with a benchmark. The results for laparoscopic versus open versus benchmark were 73%, 75%, 70% for stage I; 64%, 65%, 60% for stage II; 55%, 46%, 44% for stage III; and 0%, 11%, 7% for stage IV. While again not statistically significant, there was a trend for improved stage III survival for laparoscopic surgery. A study by Champaule\(^6\) also showed equivalence between the two procedures without reaching significance (cumulative survival probability of 63.1% for laparoscopic versus 59.1% for open procedures).

Lezoche’s data broken down by site seems to show a definite benefit for laparoscopic surgery (right colectomy: 86.5% for laparoscopic versus 81.8% for open and left colectomy: 97.1% for laparoscopic versus 88.7% for open). Even more interesting is when this group looked at their stage III survival. In a separate report of stage III patients, survival probability for right colectomy was 81.2% for laparoscopic surgery versus 66.7% for open procedures and was 95.0% for laparoscopic surgery versus 72.3% for open procedures for left colectomy.

The most significant paper of the past year was by Lacy.\(^8\) It was a prospective, randomized study of 219 patients and did reach statistical significance at 43 months. The cancer related mortality for laparoscopic surgery was 9% and for open surgery 21% (\(p = 0.02\)). The statistical significance was entirely due to the improved stage III patient survival for laparoscopic patients.

The findings in Lacy’s paper are unique in this year’s significant studies in that they reached statistical significance; however, they are similar to the trends towards improved overall survival at 3-5 years for laparoscopic surgery primarily reflected in the stage III population. Is there significance for this?

Most patients who succumb to malignant disease do so because of metastatic tumor burden. There have been many studies on local or port site recurrences in laparoscopic colon cancer surgery which have as their most consistent finding that surgical technique is the greatest contributor to whether or not local disease recurrence is kept to a minimum. If local and port site recurrence is controlled, and that is painting with a rather broad brush, then these studies at least suggest that laparoscopic surgery may have a more favorable effect on the occult micrometastasis present in stage III malignancy than a comparable open procedure.

Rocca et al\(^10\) evaluated levels of vascular endothelial growth factor (VEGF) in patients undergoing open colon cancer surgery. VEGF is a potent stimulator of tumor angiogenesis,\(^11\) without which micrometastasis cannot grow beyond several millimeters in size to become a clinically significant and detectable metastasis. Their data shows circulating levels of VEGF increasing from pre-op levels of 1.32 to 1.61 on postoperative day 2 and 2.43 on postoperative day 5.

A study by Fine (unpublished data) compared an unselected group of patients undergoing colon surgery either by laparoscopic or open technique and evaluated the data for a correla-
tion between total incision length and pre- and postoperative levels of VEGF (The difference in the appearance of the data reflects Rocca's dividing the VEGF level in pg/cc by the patient's platelet count). In patients with a total incision length of 12 cm or greater, pre- and postoperative levels were 70 pg/cc and 625 pg/cc respectively. If less than 12 cm, the levels were 44 pg/cc and 90 pg/cc. Data in neither study had sufficient volume to teach statistical significance; however in Fine's study, multivariate analysis revealed that in the subgroup of patients receiving perioperative blood transfusions, incision length alone accounted for 50% of the pre- and postoperative rise in VEGF.

While the large multi-institutional studies have yet to report what will be regarded as the greatest body of evidence to judge the relative effectiveness of laparoscopic colon cancer surgery, this year, as in the past few years, studies have consistently shown a rough, albeit usually a not significant benefit for this procedure. The consistent finding of improved stage III survival raises the question of whether “wounding” is a factor in how quickly solid tumors and their metastasis recur and whether open surgery hastens the appearance of distant occult metastasis compared to laparoscopic surgery.

This article is a synopsis of Dr Fine's presentation at Endo Expo 2002.

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Arthur P. Fine, MD, trained in general surgery at McKeesport Hospital in Pennsylvania. Before entering private practice, Dr Fine joined the US Air Force where he served as Chief of Surgery at Laughlin Air Force Base until he was discharged, and he began his private practice. He first performed laparoscopic colon surgery in 1992. Since then he has continued clinical research and has reported on the results of laparoscopic surgery in a variety of clinical settings as well as the biochemical changes that may be responsible for the improvements demonstrable to the patient.

References:
After a decade of evolution, laparoscopic urology seems to have reached its zenith and yet it continues to soar through the relentless scientific pursuit of our pioneers and dedicated stalwarts, bringing us to newer shores of achievement. Laparoscopy has successfully ventured into almost all the urologic surgical domains and has evolved as a better alternative to orthodox open surgery. As I look back, it has been an exciting and eventful journey punctuated by poignant epochs of discoveries, developments, and rare disenchantments. These developments can be grouped into three distinct categories: new techniques, new tasks or indications, and new technologies.

New Techniques. In the domain of new techniques, hand-assisted laparoscopy continues to make strides and gain popularity amongst urologists. Interestingly, a technique that was developed and utilized exclusively for transperitoneal laparoscopy has now been extended to retroperitoneoscopic procedures as well by our colleagues in Japan and South Korea. The relative ease of hand assistance entices the neophytes. However, we must use it judiciously for select indications only, where intact specimen retrieval necessitates an open incision. It should not be used indiscriminately in situations where standard trocar-only laparoscopy is feasible. Reports of the use of hand-assisted laparoscopy for simple procedures such as renal cyst unroofing and simple nephrectomy are disconcerting. I am also concerned about the 4-5% incidence of incisional hernia reported in the literature, which corroborates my personal experience in hand-assisted laparoscopy. Such incidence of incisional hernia is unacceptable. Therefore, critical closure of this small incision with unabsorbable sutures using interrupted full-thickness closure is strongly recommended.

The technique of laparoscopic radical prostatectomy is evolving through different modifications espoused by different institutions. The transperitoneal versus the extraperitoneal approach to this procedure, as well as several nuances of seminal vesicle dissection and nerve-sparing techniques, are being developed. There is not yet a consensus about urethrovessical anastomosis using the standard multiple interrupted sutures or the two running sutures.
The other areas of technique innovation have focused on the complex intracorporeal surgeries that entail difficult dissection, hemostasis, and suturing. The reconstructive surgeries on the urinary tract involve thin-walled urothelium and connective tissues necessitating the use of finer suture material. Compared to the general surgeons, urologists are relying more on freehand intracorporeal suturing techniques than the mechanical suture devices. Mastering intracorporeal suturing is therefore indispensable for advanced urologic laparoscopy.

**New Indications or Tasks.** The new indications for the Year 2002 are essentially the expansion and improvement upon what we initiated in 2001. There certainly is a profusion of laparoscopic radical prostatectomies being carried out and accepted as a preferred modality in various centers around the world. The feasibility of this procedure is now well established. Significantly less blood loss and earlier achievement of continence are proven benefits of laparoscopic radical prostatectomy. Recognition of early difficulties and limitations has led to modifications that are reducing the margin-positive rates close to that achieved with open radical prostatectomy. We eagerly await the long-term results of PSA negativity and survival statistics that need vigilant surveillance to prove the ultimate efficacy of this exquisite procedure.

The feasibility of simple and radical cystectomy has already been proven through sporadic reports in the last decade, but progress was limited by the difficulty of performing urinary diversion with the laparoscope. With progressive experience in laparoscopic intestinal anastomosis and enterocystoplasties enhanced by our intracorporeal suturing expertise, various urinary diversions using completely intracorporeal maneuvers are now accomplished with an increasing level of comfort. This has led to the performance of laparoscopic radical cystectomy at several institutions. All varieties of urinary diversion, from ileal loop to orthotopic neobladder and continent cutaneous diversions, have been done. The group at Norfolk has reported on ten patients with laparoscopic radical cystectomy and orthotopic Mainz pouch diversion done entirely intracorporeally with an impressive 100% continence rate.

It is encouraging to note that some of the minor indications and simpler procedures have resurfaced and their efficacy has been reaffirmed. The Johns Hopkins group has proven with their large series of 74 patients that laparoscopic renal biopsy is the way to go in patients in whom percutaneous biopsy is difficult or contraindicated. Similarly, the Washington University group, in their seven years' experience of 29 patients with adult polycystic kidney disease, has observed that in patients with debilitating pain, extensive laparoscopic cyst decortication can provide long-term, durable pain relief without any adverse effect on renal function.
We applaud the endeavors of the Cleveland Clinic group in pushing the envelope to the extreme through exotic indications of complex laparoscopic urologic surgeries. These include laparoscopic ileal ureter, complex partial nephrectomies with repair of the collecting system as needed, anatrophic nephrolithotomy, repair of renal artery aneurysms, etc., all of which have been performed successfully in clinical situations. In laboratory animal studies, they have proven the feasibility of laparoscopic renal autotransplantation, splenorenal bypass, and inferior vena caval and atrial thrombectomy. We eagerly await application of these exquisite procedures to suitable clinical situations in the near future. Truly, the indications of laparoscopic urology are limited only by our imagination. I envision a day when our open incision surgeries will be limited only to extracoelomic organs such as the penis, urethra, and scrotum.

New Technology. New technologies continue to aid in the progress of laparoscopic urology. For the purpose of thermal destruction of small, localized, renal cell cancers, cryoaclation seems to offer consistently good results up to the available three-years follow-up by the Cleveland group. In contrast, the radiofrequency ablation requires improvement in performance and vigilance in followup, because a significant 20-30% of tumors are showing either histologic evidence of tumor persistence or CT-enhancing lesions during followup. We eagerly await the performance of new modalities such as laparoscopic high-intensity, focused ultrasound and ferromagnetic rod placement that are showing promising results in the laboratory.

For hemostatic sealing of blood vessels and collecting systems, two new technologies show promise in the laboratory: (1) Fibrin sealant powder with lyophilized human fibrinogen and thrombin applied as a dry spray and the other more exciting method, (2) bio-degradable synthetic polyethylene glycol lactide copolymer that forms a firm gel when applied to a cut surface and activated by green xenon light (Figure 1). With hilar vascular control embolished by the use of various hemostatic sealants and suture closures, the majority of partial nephrectomies is coming to the domain of laparoscopic urology similar to the acceptance of laparoscopic radical nephrectomy as the standard of care for larger renal cell carcinomas.

In vascular clipping-stapling technology, the locking hemostatic Weck clips have proven extremely reliable and are definitely cost effective. The larger 13-mm clips are applicable to almost all the renal vessels, thereby effectively replacing the expensive vascular stapling devices (Figure 2). These clips also allow relatively more generous lengths of renal vessels during laparoscopic donor nephrectomy.
Of course, the most revolutionary recent technologic event is the interaction of intelligent, intuitive robotic devices in laparoscopic urology. This year, several institutions have reported their encouraging experience with robotic laparoscopic radical prostatectomy with a sprinkling of other procedures such as pyeloplasty, adrenalectomy, and donor nephrectomy. At present, the Zeus System by Computer Motion and the da Vinci Robotic System by Intuitive Surgical, Inc. are competing for the lucrative market share. Although conceptually similar, both systems have disparate features that provide different strengths and weaknesses to the users. The unquestionable advantage is the ease of complex dissection and intracorporeal suturing provided by robotic assistance. The evolution of robotics continues with the development of suction and retraction instruments, the addition of auxiliary robotic arms, MR-compatible robotic instruments for image-guided robotic surgery, and hopefully, instruments for proprioception and haptic feedback. The future of robotics is charged with exciting possibilities; and with robotic assistance, laparoscopic urology is poised to take the quantum leap into new-age surgery.

It is evident that the invigorating interest and enthusiasm for laparoscopy is infectious in our urologic specialty. Our new generation of residents, after two years of preliminary surgical rotation, is arriving with a backbone of basic laparoscopy through their experience in a handful of laparoscopic cholecystectomies. With that compost already in ground, their expertise is ready to blossom with further nurturing in laparoscopic urology. At the same time, laparoscopy is too good and too ubiquitous to be sequestered into a separate subspecialty in urology. It must be ingrained and incorporated into our urologic residency training. And that, is what we see happening.

The writing is on the wall and we welcome the revolution.

This article is a synopsis of Dr Das’s presentation at Endo Expo 2002.

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Sakti Das, MD, graduated in medicine from the University of Calcutta, India and completed his postgraduate training in surgery in New Delhi, India; and in the United Kingdom, he continued his training and became a fellow of the Royal College of Surgeons of Edinburgh. Dr Das completed his residency in urology at UCLA Medical Center. Currently a Professor of Urology at the University of California Davis School of Medicine, his primary focus is on laparoscopic urology. Dr Das has helped with the development and propagation of urologic laparoscopy.

References:
VIDEO AWARD AT 11th INTERNATIONAL CONGRESS

Prevention of Ureteral Injury in Difficult Laparoscopic Dissection via Infrared Ureteral Stents*

Erik Dutson, MD, Joel Leroy, MD, Didier Mutter, MD, PhD, Alain García, MD, Margaret Henri, MD, Robrecht Ceulemans, MD, Francesco Rubino, MD, Mara Arenas, MD, Jacques Marescaux, MD

This project demonstrated the use of infrared ureteral stents to help avoid ureteral injury in difficult dissections. The stents were demonstrated in a female patient undergoing a difficult laparoscopic resection for recurrent endometriosis, where they allowed dissection through tissues whose surgical planes had been destroyed by recurrent endometriosis to be completed safely with adequate visualization.

The system uses a camera capable of registering infrared energy which has no risk for heat injury. Other advantages to this technology include the ability to be clearly visualized through up to 3 cm of tissue and applicability in other parts of the body such as the esophagus in the upper alimentary laparoscopic procedures.

LAPAROSCOPIC TRAINING

Laparoscopic Training-A Work in Progress for the Urologist

Marelyn Medina, MD

Early in medical school, the lines are drawn between students of the knife and those of the pen. Those of us who did not mind getting our hands dirty went on to the different surgical specialties. In spite of the fact that our organs of interest were different, surgical maneuvers for exposure, dissection, repair, and removal were universal, and we all helped one another and incorporated each other’s techniques. The dictum of, “see one, do one, teach one,” was never questioned. If you were a good surgeon, you did not need to prove it by performing the same operation a hundred times. Diversity was the key to excellence—not monotony.

Suddenly, the last ten years have brought surgeons to frontiers unfathomable a hundred years ago. Now there is a new breed of surgeon—one not so much of the knife but of the camera. While we have become accustomed to the ubiquitous presence of laparoscopy these days, we must not forget that it represents a quantum leap in the way surgery has been performed for thousands of years and it was not a small feat by any means.

Training surgeons to assume this challenge has been problematic in many ways. In particular, the ancient specialty of urology—worthy of mention in the Hippocratic Oath—has faired poorly in bringing the advantages of laparoscopic surgery into its general fold.

While for the most part, the individual specialty boards for general surgery and gynecology have addressed the issues of training to the satisfaction of their major constituency, such cannot be said for the specialty of urology. Unlike community based general surgeons who were motivated to learn laparoscopic cholecystectomy, community urologists have not developed a passion for this approach. Unless exposed during residency or fellowship training to this modality, few urologists are willing to incorporate laparoscopy into their practices.

The fact is that we do not have a single frequently performed laparoscopic operation to create the impetus that general surgeons had with the gallbladder. While there may not be one solitary operation to concentrate on, nonetheless, there are several good, classic urologic operations that can be successfully per-
formed laparoscopically. Many of these standard procedures have been adapted by academic urologists to work better laparoscopically and should serve as a motivating factor to encourage the general urologists to perform them. After all, we were the original endoscopists.

If urologists learn to perform laparoscopic nephrectomies, then these same skills can be used to perform other familiar urological operations such as pyeloplasties and renal cyst marsupialization. With practice, more complicated urological operations, such as laparoscopic prostatectomy and radical cystectomy might follow.

Urologists who are interested in incorporating laparoscopy into their practices often go out of their way to invest time and money in attending postgraduate training courses. Shortly thereafter, they find the attendance certificate received at the end of the course is of little help in convincing hospital credentialing committees they can perform uro-laparoscopic operations on their own.

If you are the first urologist in your hospital requesting unsupervised laparoscopy privileges, you will soon encounter a skeptical group of individuals opposing you. Inevitably, the issue of who will proctor you arises. Suggestions have been made that since general and gynecological surgeons often handle ureters and kidneys, they might be likely candidates to proctor novice uro-laparoscopists in their hospitals. But, this is not in the best interest of either the patients or surgeons involved.

What urological experience general or gynecological surgeons have is related to their attempts to remove the kidneys or ureters from harms way when they are operating on adjacent organs. The purpose is rarely to operate on GU organs unless unexpected trauma is involved. It is therefore, unreasonable to expect a general surgeon or gynecologist to proctor urologists.

We must also remember the ever-present specter of litigation. Malpractice insurance companies could conceivably refuse to cover general or gynecological laparoscopists proctoring outside of their specialty.

And so, there is a quandary in urology. Logically, proctors should be practicing uro-laparoscopy. Finding and financing these talented surgeons is no easy matter, but a solution must be forthcoming. If not, we could eventually become a specialty of two groups of general urologists: the Haves and the Have Nots—the former, comprised of young uro-laparoscopists currently in urologic training programs and the latter, the old guard of urological dinosaurs practicing outdated surgical techniques in a community with high expectations.

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Marellyn Medina, MD, is currently in private practice as a general urologist in McAllen, TX. She did a Renal Transplant Fellowship, her urology and general surgical residency training, as well as medical school training at the SUNY Kings County Downstate Medical Center in Brooklyn, New York. Dr Medina also completed a Surgical Research Fellowship at TUFN-New England Medical Center in Boston where she was exposed to the early boom in laparoscopic cholecystectomy and other developing laparoscopic procedures. She is president of her own company, Borinqueen Creative Systems, which sells the Medina Trainer, an open-view ring laparoscopic simulation trainer.
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  Winter/Spring Conference focusing on a specific, topical theme or bringing together regional groups of interdisciplinary specialists who practice minimally invasive surgery.

• Special Interest Group (SIG) Committees
Over 20 SIG Committees focus on a key area of laparoscopic surgery. SIG committees present “Lap Updates” at the SLS International Congress and Endo Expo and create “Patient Information Pages” for the SLS web site. See complete SIG Committee list online at www.sls.org.

• Access to SLS Web site www.sls.org The SLS web site gives instant access to the latest scientific, educational and product information related to minimally invasive surgery. Here you will find informative articles; a CME calendar; the SLS Virtual Exhibit Hall; International Award Winners; an online, electronic discussion group; programs geared specifically towards residents; and the ability to register for events online.

• Interaction with SLS Corporate Members and Exhibitors Meet representatives from companies who invent, develop, and sell new equipment and systems for minimally invasive surgery at SLS conferences. Surgeons can promote standardization, offer practical advice, and make impartial evaluations. SLS Corporate Members and Endo Expo Exhibitors are listed in the “Virtual Exhibit Hall” on the SLS web site.

• SLS Video Lending Library Contact SLS to obtain videos produced by surgeon members and videos donated by the corporate community. (USA members only)
The Stryker InfraVision™ system is a patented system that allows the surgeons to visualize the esophagus or the ureters while performing laparoscopic surgeries. Both devices are equipped with emitting fibers that are detected by the patented InfraVision Illuminator when using the 988, 888, 882 or 688 Stryker Camera which is equipped with an Infrared filter to detect infrared light. For more information, visit www.strykercorp.com, or call (800) 624-4422.

Applied Medical's GelPort™ Hand Access Device combines the patient outcomes of minimally invasive surgery with the speed and precision ofopen surgery. Tactile feel and spatial awareness are restored, while visualization is significantly enhanced. GelPort™ is the only device that provides unlimited hand exchanges while preserving pneumoperitoneum. For more information, visit www.appliedmed.com, or call (800) 282-2212.

Gyrus Medical recently introduced the PlasmaKinetic System™ with Vapor Pulse Coagulation. The system is a new modality in electrosurgery in which the generator and instruments have been designed to work together for optimal performance and maximum clinical benefit. For more information, visit www.gyrusmedical.com, or call (800) 852-9361.

The SURx Radio Frequency Bladder Neck Suspension is a minimally invasive therapy for genuine stress incontinence. Radio frequency thermal energy is used to heat, shrink, and stabilize the endopelvic fascia supporting the bladder neck. The SURx System consists of a compact radio frequency Generator and a handheld Applicator (transvaginal and laparoscopic applicators are both available). This outpatient procedure for patients with mild-to-moderate GSI uses no foreign implantable materials. SURx patients are typically discharged to home in two-to-four hours without requiring a catheter. For more information, visit www.surx.com, or call (800) 624-7787.

The Hem-olok clip, is commonly referred to as the locking clip or sutureless tie. Hem-olok provides a snap lock closure that surgeons can feel for effective and secure ligation. The combination of the 5mm automatic clipper and the polymer clip provides the following: elimination of dropped clips or clip slip back in the clipper; 5mm port entry; security of suture with clip technology. For more information about the Endo5® Endoscopic Automatic Clip Applier with Hem-olok®, visit www.wecksurgical.com, or call (800) 234 9325. For photo, see page 20.

The LigaSure™ vessel sealing system offers the surgeon versatility and reliability when ligating vessels and tissue bundles in laparoscopic surgery. This hemostats device works by fusing the collagen and elastin in vessels to create a seal of confidence. Tissue bundles and vessels up to and including 7 mm in diameter are permanently fused without dissection or isolation. For more information visit, www.valleylab.com, or call (800) 255-8522.

IMAGE1® Digital at the source with more than ten patents-pending, Image 1 is the first camera head to convert the optical image to a digital signal at the CCD sensing chip. Image 1 delivers digital imaging that realistically renders the patient anatomy for the cleanest, sharpest images. Proper balance and intuitive control provide effortless operation and one-handed manipulation of all camera functions. And digital conversion at the source minimizes image artifacts while reducing environmental influences. For more information, visit www.karlstorz.com or call (800) 421-0837.
ANNOUNCEMENTS

SLS Board of Trustees 2002-2003

The Society of Laparoendoscopic Surgeons (SLS) announces the 2002-2003 Board of Trustees. The Executive Committee and Officers are: President, Richard M. Satava, MD, Seattle, Washington; Vice President, Elspeth M. McDougall, MD, Orange, California; Secretary-Treasurer and new Trustee, Camran Nezhat, MD, Palo Alto, California; and Chairman, Paul Alan Wetter, MD, Miami, Florida.

Other members of the Board of Trustees 2002-2003 are: Immediate Past President, Farr Nezhat, MD, New York, New York; Charles H. Koh, MD, Milwaukee, Wisconsin; Harrrith Hasson, MD, Chicago, Illinois; Raymond J. Lanzafame, MD, MBA, Rochester, New York; William E. Kelley, Jr., MD, Richmond, Virginia; Morris E. Franklin, Jr., MD, San Antonio, Texas; Michael S. Kavic, MD, Youngstown, Ohio; Carl J. Levinson, MD, Menlo Park, California; Linda Steckley, MBA, Durham, North Carolina; and Ronald Fieldstone, Esq., Coral Gables, Florida.

The SLS Board of Trustees meets monthly and has an important and active role in the mission, programs, and activities of the Society of Laparoendoscopic Surgeons. SLS appreciates the commitment each Board member makes in accepting this role and is thankful for the volunteer time the Board spends attending meetings, planning and working on behalf of the members and organization.

SLS Members Respond to Survey

The SLS Member Annual Survey is an important needs assessment tool for SLS as it plans future programs. To meet the needs identified, SLS will offer a comprehensive program at the 12th International Congress and Endo Expo, September 22-25, 2003, in Las Vegas including postgraduate courses, general and concurrent sessions, laparoscopy updates, scientific papers, open forums, videos, and poster presentations addressing all areas of minimally invasive surgery. Additionally Endo Expo 2003 will bring together the leading instrument manufacturers and service providers in the exhibit hall.

2002 Needs Assessment Results

Topics of Most Interest to SLS Members

Laparoscopic Procedures/Multispecialty
Prevention and Management of Complications
Anatomical Problems and Anomalies
Procedure Specific Anatomy

Techniques and Equipment
Instrument Innovations
Robotics: Need for Training and Equipment Acquisition
Electrosurgery

Laparoscopic Surgical Procedures/General Surgery
GERD/Antireflux
Bowel Surgery
Laparoscopic Ventral Herniorrhaphties:
Indications, Benefits, Costs, Techniques

Laparoscopic Surgical Procedures/Gynecology and Urology
Urinary Bladder Surgery
Ureteral Injury
Nephrectomy

Laparoscopic Surgical Procedures/Gynecology
Endometriosis
Adhesiolysis
Ovarian Surgery

Laparoendoscopic Issues/Multispecialty
Coding
Legal Issues
Hand Assisted Lap Surgery Uses, Necessary Training, Complications, Credentialing

Other Applications
Pediatric Surgery
THE SOCIETY OF LAPAROENDOSCOPIC SURGEONS

LAS VEGAS
SEPTEMBER 22-25, 2003

12th INTERNATIONAL CONGRESS AND ENDO EXPO
SLS ANNUAL MEETING
BALLY'S LAS VEGAS • LAS VEGAS NEVADA USA

Conference Program Directors:
Richard M. Satava, MD; Elspeth M. McDougall, MD
Scientific Chair: Carl J. Levinson, MD
General Chair: Paul Alan Wetter, MD

Monday, September 22, 2003
Preliminary Postgraduate Courses:
- Prevention and Management of Laparoscopic and Endoscopic Surgical Complications
- Adhesion Management and Avoidance
- Gynecologic Problems for the Minimally Invasive Surgeon
- Robotics: What You Should Know to Get Started
- Hysteroscopy
- Part A: Diagnosis and Treatment of GERD: Surgical Approaches
  Part B: Laparoscopic Cholecystectomy and Common Bile Duct Management: The 21st Century
- General Surgery Problems for the Minimally Invasive Surgeon
- Advanced Laparoscopy Management of Myomas, Endometriosis and Pelvic Floor Disorders, Including Hysterectomy and Conservative Repairs
- Masters Class in Laparoscopic General Surgery

Opening Ceremony
Presidential Address
Honorary Chair Presentations
Welcome Reception
Innovations of the Year

Tuesday, September 23, 2003
GENERAL SESSION
Best of Laparoscopy Updates
MULTI-DISCIPLINARY PLENARY SESSION
Laparoscopy in Pregnancy
GYNECOLOGY AND UROLOGY SESSION
Pelvic Reconstructive Surgery
GENERAL SURGERY SESSION
Laparoscopic Endocrine Surgery
Scientific Papers/Videos/Open Forum Presentations
SLS SIG Committee Laparoscopy Updates Gala Dinner – Group Event

Wednesday, September 24, 2003
Award Winning Scientific Papers and Videos Presentations
Excel Award Presentations and Lectures
Live Telesurgery
New Product Presentations by Exhibitors
Best Poster and Resident Award
Winning Paper Presentations
Scientific Papers/Videos/Open Forum Presentations
SLS SIG Committee: Laparoscopy Updates

Thursday, September 25, 2003
Breakfast with Keynote Speaker
Future Technology Session
Closing Ceremony

CONFERECE DEADLINES
Abstract Submission: February 21, 2003
Early Registration: July 21, 2003
Submit abstract or register online at www.sls.org

Society of Laparoscopic Surgeons
7330 SW 62nd Place, Suite 410 • Miami, FL 33143
TEL: (305) 665-9959 or (800) 446-2659
FAX (305) 667-4123
E-mail: registration@sls.org or abstracts@sls.org

*Speakers and sessions subject to change.
More Highlights from New Orleans 2002

Avoiding Legal (Malpractice) Problems

1. Knowledge is power. Find out why complaints, lawsuits "really" begin. What triggers the complaint?

2. When all is not going well—according to expectations, give the problem more time, expend more effort, and make yourself more visible. Be concerned; show the concern.

3. Tell the truth, quickly, early.

4. Get experienced advice, not necessarily from someone who is cynical or glib.

5. We study much about what and how to do. Learn also what not to do, why not, and the traps of the activity.

6. Improve and sharpen well-tried and effective skills before rushing to new misadventures.

7. Know more than your opponent.

8. Work harder at preventing a problem for yourself than at getting into trouble.

9. The shortest distance between two points is not always a straight line.

   --Harry Rein, JD, MD

"Laparoscopic ablative surgery for renal carcinomas has become well accepted and is now considered the standard of care for patients with organ-confined disease.

Laparoscopic reconstructive urology is playing an ever increasing role in minimally invasive surgical therapies for patients with urologic disease. However, these procedures are technically very challenging.

Robotic assisted surgery is a major factor in facilitating the laparoscopic reconstructive urologic procedures and will play an increasingly prominent role in the advancement of this aspect of laparoscopic urology.

The training and maintenance of laparoscopic urology skills has been a limiting factor in the widespread application of this minimally invasive surgery for urologic patients. New concepts in training and skills assessment are required for dissemination of laparoscopic urology to community urologists. These training concepts are presently in the formative stages of development."

   --Elspeth M. McDougall, MD

"Robotics will inevitably find their way into mainstream medicine over the next decade, however, all procedures will not benefit from the technology.

The role of robotics will have to be defined by those that show a clear benefit to both patient and surgeon.

The challenge ahead will be training new and existing surgeons the new techniques."

   --Thomas Jarrett, MD

SLS Fun Night-A New Orleans Style Parade.
InterAmerican MultiSpecialty Congress of Laparoscopy and Minimally Invasive Surgery

February 20-22, 2003
Miami Beach, Florida, USA

A unique exchange of culture and education...

Experience the distinctive cultures of Latin America in MIAMI...
Colorful Neighborhoods
Latin-Beat Music
Ethnic Restaurants
Theater, Cabaret and Cinemas
Art Galleries, Museums
South Beach Night Clubs
Art Deco District and more!

Delegates of leading Laparoscopists will create a unique exchange of cultural information and education in minimally invasive surgical approaches and techniques

sponsored by the Society of Laparoendoscopic Surgeons with participation from the University of Miami School of Medicine held at The Alexander All-Suite Oceanfront Resort

Register online at www.sls.org
Society of Laparoendoscopic Surgeons
330 SW 62 Place Suite 410, Miami, FL 33143
TEL FREE (800) 446-2659 • FAX (305) 667-4123
E-Mail: interamerican@sls.org

REASONS TO ATTEND
• Experience a unique conference offering a multi-specialty approach to minimally invasive surgery.
• Designed to expand your knowledge of the use of laparoscopic diagnostic and treatment techniques taught by acknowledged leaders in their respective specialties and countries.
• Topics are presented in general sessions providing a multidisciplinary approach to specialty minimally invasive surgical techniques and procedures.
• Understand how different countries have met the challenges of training in minimally invasive surgery.
• Visit exhibits showcasing the latest products and equipment from nationally known and respected suppliers.
• Learn about the cultural differences and similarities between neighboring countries in Latin America.

CONFERENCE OBJECTIVES
It is the objective of SLS to provide congress attendees with newfound knowledge and applications. Physicians attending this congress will develop a clearer concept of new and standard instrumentation and an improved comprehension of laparoscopic and endoscopic techniques. Additionally, physicians will participate in an exchange of information between surgeons representing their country or a professional organization on the challenges they face practicing and teaching minimally invasive surgery.
INTERAMERICAN MULTI-SPECIALTY CONGRESS OF LAPAROSCOPY
AND MINIMALLY INVASIVE SURGERY

FEBRUARY 20-22, 2003
Miami Beach, Florida

Role of Laparoscopy in the Americas and beyond...

PROGRAM

THURSDAY, FEBRUARY 20, 2003
3:00 pm - 6:00 pm
Conference Registration
Opening Ceremony: Presentation by the Honorary Chairs, Introduction of Country Delegations
Welcome Reception - Exhibit Hall and Mezzanine

FRIDAY, FEBRUARY 21, 2003
7:15 am - 7:45 am
Continental Breakfast and Visit Exhibits
General Session, Opening Remarks
HYSTERECTOMY: Laparoscopic Myomectomy, Laparoscopic Hysterectomy, Total Laparoscopic Hysterectomy - Video
Cultural Presentation - Chile
GALL BLADDER and BILIARY FACTORS: Management of Biliary Tract Injury, Prevention and Management of Biliary Tract Injuries, Difficult Cholecystectomy-When to Convert?
Break and Visit Exhibits
To Be Announced
URO-GYNECOLOGY: Evolution of the Videoscopic Bladder Neck Suspension, Long-Term Follow-Up After Videoscopic Bladder Neck Suspension, Laparoscopic Management of Female Incontinence
APPENDICECTOMY: The Advantages of Endoscopic Surgery in Complicated Appendicitis, Complicated Appendicitis: Laparoscopic Approach
Cultural Presentation - Mexico
Lunch Break and Visit Exhibits
LAPAROSCOPY AND CANCER: Standards of Quality of Care/Quality of Life, Laparoscopic Management of Ovarian Cyst
BARIATRICS: Complications in Bariatrics Surgery, Laparoscopic Adjustable Gastric Band - Results and Techniques
ENDOMETROSIAS: The Role of Gn-Rh Agonists and Antagonists in the Treatment of Endometriosis, Laparoscopic Treatment of Severe Endometriosis Involving bowel, Bladder and the Ureter; Laparoscopic Management of Severe Endometriosis in Mexico
Break and Visit Exhibits
HERNIA: Laparoscopic Ventral Hernia Repair

SATURDAY, FEBRUARY 22, 2003
7:30 am - 8:00 am
Continental Breakfast and Visit Exhibits
OFFICE LAPAROSCOPY: Office Microlaparoscopy Under Local Anesthesia, Microlaparoscopy
PEDIATRIC SURGERY: Overview: Pediatric Laparoscopy, Foregut Procedures-Applications for Laparoscopy in Children
Cultural Presentation - Portugal
LOW COST TRAINING OF MINIMALLY INVASIVE SURGERY
Refreshment Break and Visit Exhibits
SPECIAL ABDOMINAL: Hand-Assisted Laparoscopic Surgery for Benign and Malignant Disease, Laparoscopic Colectomy
Surgery: The Brazilian Experience, Trans Anal Endoscopic Microsurgery
SPECIAL PRESENTATIONS
Laparoscopy and Hysterectomy in Reproductive Endocrinology and Infertility Patients, Laparoscopic Treatment for Anovulation in PCOD-An Ideal Indication for the Harmonic Scalpel, Radiofrequency: Another Tool in Electrosurgical Equipment, Unusual Applications of Laparoscopy: Laparoscopic Treatment of Biliary Ascaris-video, Endopelotomty with Cutting Balloon - Video, Odd Situations in Laparoscopic Surgery and How to Solve Them - Video
OPERATIVE LAPAROSCOPY: How did we get here? What is important now? And Where are We going?
DESTINATION INFORMATION

Experience the distinctive cultures of Latin America and the Caribbean in Miami...Colorful neighborhoods, Latin and Caribbean music, world-class ethnic restaurants, theater, cabaret and cinemas, art galleries, museums, South Beach Night clubs, the Art Deco District, and more. You can spend your free hours basking in warm sunshine, relaxing on some of the world's most beautiful beaches, and enjoying the exciting nightlife of South Beach. You can wake up to a steaming cup of Café Cubano, and spend the morning shopping and browsing in the shops of Lincoln Road, Miracle Mile in Coral Gables, the new Village at Merrick Park in Coral Gables, Bal Harbour, Bayside Marketplace, Coconut Grove, and the growing Design District in Miami. Dine at one of the many restaurants featuring cuisine from virtually any country in the world. Cultural activities include the Jackie Gleason Theater, the Bass Museum of Art in the Art Deco District, the New World Symphony, the Florida Grand Opera, and the Florida Philharmonic Orchestra.

For families with children, entertainment options include the Miami Seaquarium, Parrot Jungle, Miami Metro Zoo, Miami Museum of Science & Space Transit Planetarium, Monkey Jungle, the Everglades Royal Palm Visitor Center for guided walks through the Everglades, Biscayne Bay National Park for snorkeling and more.

There is something for everyone to enjoy while visiting Miami. So plan to come a few days ahead or stay a few days later and enjoy this tropical wonderland.

Visit www.gmcvb.com for more information on shopping, dining and entertainment options for you and your family.

CONGRESS HOTEL ACCOMMODATIONS

The Alexander All Suite Oceanfront Resort
5225 Collins Avenue
Miami Beach, Florida 33140
Telephone: 305-341-6500
Fax: 305-341-6553
Website: www.alexanderhotel.com

The beachfront Alexander Resort is situated directly on the Atlantic coast. Quite literally on the sand, guests of the hotel have a quick, convenient access to pristine beaches. The Alexander's Aquasports Center provides both on and offshore activities for guests of the hotel spending their leisure time enjoying this exclusive strip of South Florida's best beaches. The hotel, situated in the exclusive Millionaires Row of Miami Beach, is minutes away from world-renowned South Beach, the historic Art Deco District, Coconut Grove, Lincoln Road, Bayside Marketplace, and the Shops at Bal Harbor.

The Alexander's two lagoon-shaped swimming pools are set into an acre of lush tropical gardens with a cascading waterfall as a backdrop. Guests can relax in either of the property's two Jacuzzis and enjoy al fresco dining and bar service provided by Top of The Falls grill.

Onshore activities include volleyball, paddleball, swimming, and a fitness center. Off the hotel's exclusive beach, guests can enjoy parasailing, kayaking, Banana Boat rides and jet skiing for touring the beach.

HOTEL RATES

Special daily rates for congress attendees are $265.00, European plan (no meals) plus tax. One night's deposit is required. An $8.00 incidental fee will be included for admission to the Fitness Center, unlimited local calls and toll free access, as well as a daily newspaper. The Portage Fee is $5.00 per person, round trip and a $2.50 Maid Service per person, per day.

Make your reservations no later than January 6, 2003. After January 6, 2003, reservations will be confirmed on a space availability basis only.

For those attending the congress who require special assistance (accessibility, dietary, etc.), please notify the hotel of special requests upon making your reservations or before January 6, 2003.

CREDIT HOURS

Accreditation The Society of Laparoendoscopic Surgeons (SLS) is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

Designation SLS designates this educational program (InterAmerican MultiSpecialty Congress of Laparoscopy and Minimally Invasive Surgery) for a maximum of 9.50 hours in category 1 credit towards the AMA Physician's Recognition Award. Each physician should claim only those hours of credit that he/she actually spends in the educational activity.

For more information and to register online visit www.sls.org
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Auto Suture’s support programs include both patient education and bariatric practice information resources.
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3. Repeat again in ten minutes.

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\(^1\) Based on patient assessment. \(^2\) As rated by gastroenterologists

**PROFESSIONAL USE WARNINGS AND PRECAUTIONS.** Do not use in patients with congenital megacolon, bowel obstruction, ascites, congestive heart failure or kidney disease. Use with caution in patients with impaired renal function, heart disease, acute myocardial infarction, unstable angina, pre-existing electrolyte disturbances, increased risk for electrolyte disturbances (e.g. dehydration, debility, gastrointestinal obstruction, gastric retention, bowel perforation, colitis, inability to take adequate oral fluid, taking diuretics or other medications that affect electrolytes), with debilitated patients or with patients who are taking medications known to prolong the QT interval. In at-risk patients, consider obtaining baseline and post-treatment sodium, potassium, chloride, bicarbonate, calcium, phosphate, blood urea nitrogen and creatinine values in those individuals who are directed to take more than 45 mL of oral sodium phosphate in a 24-hour period. There is a risk of elevated serum levels of sodium and phosphate and decreased levels of calcium and potassium; consequently, hyperphosphatemia, hypernatremia, hypocalcemia, hypophosphatemia and acidosis may occur. Addional fluids by mouth are recommended with all bowel-cleansing dosages. No other sodium phosphate preparations should be given concomitantly. OVERDOSAGE. Overdosage or retention may lead to severe electrolyte disturbances, including hyperphosphatemia, hypernatremia, hypocalcemia and hypokalemia, as well as dehydration and hypovolemia, with attendant signs and symptoms of these disturbances such as metabolic acidosis, renal failure and tetany. Certain severe electrolyte disturbances may lead to cardiac arrhythmia and death. The patient who has taken an overdose should be monitored carefully. Treatment of electrolyte imbalance may require immediate medical intervention with appropriate electrolyte fluid replacement.
Think Harmonic Scalpel is used in only a few types of procedures? Think again. The Harmonic Scalpel offers a variety of configurations for a multitude of procedures. Its advanced design allows you to grasp, cut, coagulate, and dissect all with one instrument.