The FISH®
Glassman Viscera Retainer

The Ring of Safety

The presence of the ring during abdominal closure is an effective indicator of a retained instrument.

The FISH® effectively retains the omentum and viscera during closure of the peritoneal cavity.

It provides added anchorage and retentive powers to speed closure and significantly reduce the risk of nicks and punctures. The pliable, latex-free material folds into a narrow roll for easy removal.

Buy direct from:

665 Pleasant Valley Road
Diamond Springs, CA 95619
Toll Free 1-800-222-8445
530-621-1220
530-621-1310 fax
e-mail: adeptmed@aol.com
Web Site: www.adeptmed.com

THE GLASSMAN VISCERA RETAINER, FISH® IS PRODUCED EXCLUSIVELY IN THE USA
Jejunal Gastrointestinal Stromal Tumours Presenting as Common Abdominal Symptoms and a Review of the Literature

Rosemary Smith, MBChB
Neeraj Bhasin, BSc (Hons) MB, BS, MD, MRCS
Philip Da Costa, MB, BS, MRCS, LRCP, FRCPath
Tarig Ahmed, MBChB (Hon) FRCS I (Gen)
C Raj Kapadia, MS FRCS, MBA

Recurrrent Abdominal Wall Hernia After Adjustable Gastric Band Placement – A Case Report

Fernando Miranda, MD
Audencio Alanis, MD

Venous Air Embolism During Laparoscopic Surgery Due to a Patent Foramen Ovale

Aiesha Ahmed, MD
Max R. Lowden, MD
Gary Thomas, MD

Successful Simultaneous Laparoscopic Hand-Assisted Bilateral Nephrectomy And Living Donor Kidney Transplantation For Polycystic Kidney Disease

Lena Sibulesky, MD
Darrin L. Willingham, MD
C. Burcin Taner, MD
Dana K. Perry, MD
Justin H. Nguyen, MD

Adjustable Gastric Band Erosion: Endoscopic, Laparoscopic, or Open Approach? A Case Report and Literature Review

Fernando Miranda, MD, FACS
Audencio Alanis, MD

Closure of the Perforated Gastric Ulcer Using the Round Ligament of Liver, Pathologically Changed Due to Ulcer Penetration: Report of a Case

Yuri N. Shiryajev, MD
Maria A. Bernstein, MD
Vladimir D. Evstratov, MD
Elena V. Bulanova, MD
Mikhail A. Protchenkov, MD

Retroperitoneal Bronchogenic Cyst Masquerading as an Adrenal Mass, Successfully Treated with Hand-Assisted Laparoscopic Surgery

Nelly Tan, MD
Deba Sarma, MD
Julie Ann Sosa, MD
Eyiymisi Damiyah, BA
Sanziana Roman, MD

Macroductyilia and Intestinal Lipomatosis

Ghaffar Khair, MD
Charan Singh, MD
Sheila Major, MD
Matthew J. Hyser, MD, FACS

The Surgeon Newsletters

Future Meetings

ASAS Application

ABAS Procedure for Certification

Guidelines for Authors
Jejunal Gastrointestinal Stromal Tumours Presenting as Common Abdominal Symptoms and a Review of the Literature

Rosemary Smith, MBChB*
Neeraj Bhasin, BSc(Hons)
MB, BS, MD, MRCS(Eng)*
Philip Da Costa, MB, BS, MRCS, LRCP, FRCPath†
Tarig Ahmed, MBBS (Hon) FRCS I (Gen)*
C Raj Kapadia, MS FRCS, MBA*

*Departments of General Surgery and †Histopathology
Airedale General Hospital
Skipton Road, Steeton, Keighley, West Yorkshire, BD20 6TD. ENGLAND

Corresponding author:
Dr Rosemary Smith FH1 to Mr Kapadia
Care of Mr Kapadia Secretary
Airedale General Hospital
Skipton Road
Steeton, Keighley, West Yorkshire, BD20 6TD
Tel: 07786 102291
Fax: 01535 292927
E-mail: rose_smith_1984@hotmail.com

ABSTRACT AND SUMMARY
Gastrointestinal stromal tumours (GISTs) are rare representing 0.1-3% of all gastrointestinal malignancies. They are mesenchymal tumours whose behaviour is driven by mutations in the tyrosin kinase receptor c-KIT.

We report two jejunal GISTs presenting as common abdominal problems along with a review of the literature.

INTRODUCTION
Gastrointestinal stromal tumours (GISTs) are rare mesenchymal neoplasms of the gastrointestinal tract characterised by the over expression of the tyrosin kinase receptor c-KIT, representing only 0.1-3% of all gastrointestinal cancers with an estimated incidence of 15 per million people. We report two GISTs treated in our hospital which presented as common surgical abdominal problems along with a review of the literature.

CASE 1
A 36-year-old male presented acutely with fresh red per rectal bleeding. He was clinically shocked on admission with a haemoglobin of 9.6 g/dL. He was investigated for anaemia 10 years previously when he had normal gastroscopy and colonoscopy. Following a collapse on the ward an emergency CT angiogram showed a bleeding point at the proximal jejunum but the bleeding point could not be embolised (Figure A). The patient had an emergency laparotomy which showed a tumour at the proximal jejunum which was removed with primary anastomosis. Histology showed a GIST. The jejunal tumour was strongly positive for CD 117 and CD 34, weakly positive for smooth muscle actin, and negative for S100 and desmin, confirming the diagnosis on immunochemistry. This was stratified as low risk as the tumour was between 2 and 5 cm in diameter and showed less than 5 mitoses per 50 high power fields. His postoperative recovery was uncomplicated.
CASE 2
A 75-year-old female presented with a 3 month history of gradually worsening epigastric pain, associated with nausea and approximately ½ stone in weight loss. On examination there was a palpable smooth tender mobile mass in the right umbilical region. A CT scan showed a 6.8 cm lobular solid mass within the right side of the lower abdomen in close proximity to both large and small bowel but not definitely arising from either, one loop of small bowel was inseparable from the mass at one point (Figure B). The patient went on to have a laparotomy and the mass involving the jejunum and greater omentum was completely excised (Figure C). Histology showed a GIST, confirmed on immunohistochemistry. This was stratified as low to intermediate risk as the tumour was between 5 and 10 cm in diameter and showed less than 5 mitoses per 50 high power fields. Her postoperative recovery was uncomplicated.

DISCUSSION
GISTs are gastrointestinal mesenchymal tumours occurring in 15 per million people. In one particular study of 906 GISTs there was a 55:45 male-to-female ratio with a median age of 59 years (range 13-94 years). Only 0.6% occurred before 21 years and 13.6% before 40 years. KIT was immunochemically detected in 98%, CD34 in 40%, smooth muscle actin in 34%, desmin in 0.2%, and S-100 protein in 14% of the tumours tested.

Presentation depends on the size and the location of the GIST. The diameter of GISTs can range from a few millimetres to greater than 30 cm. Large GISTs can cause non-specific abdominal discomfort, pain, bloating, early satiety or increasing abdominal girth. Erosion into the gastrointestinal tract can induce significant haemorrhage presenting as haematemesis, melena, or the clinical signs of anaemia. They have also been known to cause dysphagia, biliary obstruction, and intestinal obstruction in the small bowel.

Gastrointestinal bleeding (50%) is the most common presentation, followed by abdominal pain (20-50%), obstruction (20%), and approximately one third are detected incidentally. A review of surgical emergencies showed similar findings with every GIST in the study presenting with gastrointestinal bleeding. Our cases highlight GISTs presenting with gastrointestinal bleeding and abdominal pain.

They are found primarily in the stomach (60-70%) with the small intestine being the second most common location (30%) as reported in our cases. Less frequent sites include the colon, rectum and the oesophagus.

Surgery remains the first line treatment for resectable non-metastatic GISTs. They are not responsive to conventional radiotherapy and chemotherapy and therefore unresectable GISTs were considered to be untreatable. However, in May 2002 the c-KIT tyrosine kinase inhibitor Imatinib was granted a license for the treatment of advanced unresectable or metastatic GISTs. Data presented at the 2007 American Society of Clinical Oncology meeting showed that adjuvant treatment with Imatinib following surgical resection of GIST tumours can significantly reduce the risk of disease recurrence (6% recurrence on imatinib versus 17% without therapy at 12 months).

GISTs are one of the most common mesenchymal tumours of varying differentiation. Grossly they are well-demarcated spherical masses that appear to arise from the muscularis propria layer of the gastrointestinal wall.
The number of mitotic figures present can be used to histologically grade GISTs, but currently no standard exists for the classification of GISTs. In general, those with less than one mitotic figure per fifty high-powered fields (HPFs) are correlated with benign behaviour, one to five mitoses per ten HPFs suggests potential malignancy, greater than five per ten HPFs indicates malignancy and a finding of greater than ten per ten HPFs denotes high-grade malignancy. [9]

Although radiological or histological findings may suggest a GIST, the diagnosis must be made immunochemically. Most GISTs express the CD34 antigen (70-78%) and the CD117 (72-94%) antigen. The CD34 protein is a haematopoietic progenitor cell antigen that occurs in a variety of mesenchymal tumours. CD117 is also known as the c-KIT protein; it is a membrane receptor with a tyrosine kinase component. Mutations in the CD117 gene have been linked to malignant behaviour in GISTs.[9, 10]

Other markers that have been used in the evaluation of GISTs include desmin, actin and S100. Approximately 20-30% of GISTs express smooth muscle actin, 5-10% desmin, and 10% S100. [9]

In conclusion, although rare, GISTs must be considered in the differential diagnosis of patients presenting with abdominal pain or upper gastrointestinal bleeds as shown in our cases of patients with jejunal GISTs. Surgical removal is generally indicated at the time of detection for resectable non-metastatic tumours, otherwise the use of Imatinib is indicated.

REFERENCES
Recurrrent Abdominal Wall Hernia 
After Adjustable Gastric Band Placement – 
A Case Report

Fernando Miranda, MD
Audencio Alanis, MD
Department of Surgery
Surgery Specialty Hospitals of America
Pasadena, Texas

Corresponding author:
Fernando E. Miranda, M.D.
4141 SW Freeway
Suite 400
Houston, Texas 77027
Tel: (713) 960-0590
Fax: (713) 960-0722
E-mail: fmiranda@drfmiranda.com

INTRODUCTION
Abdominal wall hernias present at the time of bariatric surgery raise the issue of concomitant repair versus subsequent repair after weight loss. A case report of a patient who underwent a gastric band placement with an incidental finding of an umbilical hernia repaired primarily is presented recurring with small bowel incarceration and obstruction.

CASE REPORT
A 50 year-old male underwent a gastric band placement in July of 2009. An adjustable gastric band was placed with no complications. An umbilical hernia was identified. It was repaired primarily with absorbable suture. He appeared with a non-reducible abdominal wall hernia with obstruction. A resection with anastomosis was performed. The hernia defect was repaired with biodegradable mesh. No postoperative complications developed.

CONCLUSION
Abdominal wall hernias, discovered at the time of band placement should be repaired. Controversy still remains regarding the type of repair for hernias at risk of incarceration.

PURPOSE
Incidental abdominal wall hernia repair during bariatric surgery still remains controversial in view of the increased recurrence rate due to obesity. A case report is presented of a patient with an adjustable gastric band repair and a concurrent umbilical hernia repair that later recurred.
non-toxic with a mildly distended abdomen, and tenderness over the umbilical area where there was a non-reducible abdominal wall hernia. He had no peritonitis. A cat scan of the abdomen showed a loop of small bowel incarcerated in the hernia. His white count was 6.73.

In the operating room, the laparoscope was used. An abdominal wall hernia was found with incarcerated small bowel (Figure 1). Questionable viable bowel was reduced, and eventually a small bowel resection with anastomosis was performed. The Hernia defect was repaired by placing a large biodegradable mesh (Covidien, Mansfield, Massachusetts) secured with transfascial sutures (Figure 2). No post operative complications developed.

DISCUSSION
Small bowel obstruction is a rare complication after adjustable gastric band placement. Causes of obstruction such as bowel twisting around the tubing and erosion of band with intraluminal migration have been described in the literature.\(^5\,\,6\,\,7\,\,8\,\,9\,\,10\) Small bowel obstruction due to an abdominal wall hernia after adjustable gastric band placement has been rarely described. Concomitant repair of abdominal wall hernias along with bariatric procedures is a controversial issue seldom evaluated in the literature. There is no clear consensus among bariatric surgeons on the optimal time and method of abdominal wall hernia repair.\(^11\) Obesity is a well known risk factor for the occurrence of incisional hernias.\(^12\) Schuster\(^12\) describes safe and low recurrence in the concurrent repair of abdominal wall hernias at the time of gastric bypass. Biodegradable mesh repair is now favored.\(^13\) Anthony\(^14\) compared recurrence rates between obese and non-obese patients. While there was no statistical difference between both groups, the specific group with mesh repair showed a significant increased recurrence rate (p=0.03).

Although there are few reports describing the abdominal wall hernia repair dilemma at the time of gastric bypass, there are minimal data regarding concurrent or delayed repair of these hernias along with adjustable gastric banding placement. Although the gastric band placement poses a simpler dilemma due to the clean nature of the procedure, controversy still remains regarding the type of repair and timing of the procedure. Although concurrent mesh repair if favored, due to the high recurrence of primary repair, mesh repair carries its own risks, including enterocutaneous fistula, sinus tract fistula, chronic pain, small bowel obstruction, mesh infection, and seroma formation, in addition to the high cost added to the procedure. Burger\(^15\) reported a higher incidence of complications with mesh repair including 3% enterocutanoeous fistulae and 5% sinus tract fistulae. There seems to be a consensus that after weight loss, the risk of recurrence decreases. However, small abdominal wall hernias posing a risk of incarceration, such as a small reducible hernia, may need to be repaired at the time of discovery. This was the impression at the patient’s primary surgery, and, therefore, the hernia was repaired at the time. By the time the hernia was repaired for the second time, questionable viable bowel was found, and a small bowel resection was performed prior to repairing the hernia with biodegradable mesh.

CONCLUSION
Abdominal wall, reducible hernias, discovered at the time of laparoscopic adjustable band placement should be repaired. Controversy still remains regarding the type of repair for hernias at risk of incarceration.
REFERENCES


Venous Air Embolism During Laparoscopic Surgery Due to a Patent Foramen Ovale

Aiesha Ahmed, MD
Max R. Lowden, MD
Gary Thomas, MD

Department of Neurology,
Penn State College of Medicine

ABSTRACT
Venous air embolism (VAE) is the entry of air into the central or peripheral vasculature. In patients undergoing laparoscopic procedures, venous air embolism can occur due to instrumentation particularly during insertion of catheters or trocars. The resultant entrapment of intravascular gas can lead to severe neurologic injury, cardiovascular collapse, and even death.

INTRODUCTION
This article presents the case of a 44-year-old woman who was undergoing laparoscopic surgery to remove the gastric banding with intention for further conversion to gastric bypass. She suffered an inferior vena cava laceration due to presumed trocar injury. As she had an unknown PFO, she infarcted bilateral cerebral hemispheres due to paradoxical embolism. The factors that determine the subsequent morbidity and mortality in VAE include the rate of air entrainment, the volume of air introduced, the position of the patient at the time of the embolism and presence of a patent foramen ovale (PFO). This case highlights the discussion regarding the assessment of factors, pre and intraoperatively that can lead to air embolism.

CASE PRESENTATION
A 44-year-old woman with history of obesity had a laparoscopic gastric banding procedure done 1 year ago with resultant dysphagia, reflux symptoms and inadequate weight loss. For these complaints the patient was scheduled for an elective laparoscopic removal of the gastric band with further conversion to a gastric bypass. Pre-operative evaluation including physical examination was unrevealing.

Surgery was complicated by intraperitoneal scar tissue encountered that made optical trocar entry difficult and this approach was aborted with removal of the trocar. A subcutaneous dissection was started in order to perform an open port placement. At that time the patient’s blood pressure was noted to drop dramatically requiring fluid resuscitation. In view of a potential vascular injury, the peritoneal cavity was rapidly opened and free blood was seen with laceration of the inferior vena cava (IVC). The peritoneal cavity was packed with laparotomy pads and the IVC was compressed. An emergent transesophageal echocardiogram (TEE) demonstrated air in the cardiac chambers and a large PFO.

The patient’s condition continued to deteriorate requiring vasoactive medications and ultimately complete cardiac bypass after performing a sternotomy. The IVC was explored carefully and a through-through injury to the vessel was noted. Initial attempts to repair both aspects of the vessel failed requiring ligation by the vascular surgery team to allow a more careful repair. Return of homeostasis was achieved after this and discontinuation of cardiac bypass was possible.

PHYSICAL EXAMINATION
On examination after the surgery, the patient was comatose on ventilator support. Neurologic examination revealed 4mm pupils bilaterally which were sluggishly reactive, no facial asymmetry, no purposeful movements noted to verbal or pain stimulation.
IMAGING STUDIES
Based on the neurological exam and in the setting of a complicated surgery, a severe neurological insult was suspected and a computerized tomography (CT) scan of the brain was obtained. This demonstrated diffuse cerebral edema with large areas of hypotenuation in the bilateral cerebral hemispheres that are most consistent with evolving infarcts. (Figure 1).

![Figure 1: CT scan of the brain non-contrast showing diffuse cerebral edema with large evolving infarct noted on the right hemisphere. There is 9 mm of right to left transtentorial herniation and significant effacement of the suprasellar cistern.](image)

Magnetic resonance imaging (MRI) obtained 3 days after surgery (Figure 2) showed extensive areas of restricted diffusion involving the gray matter of the cerebral hemispheres bilaterally right more than left consistent with embolic infarcts.

![Figure 2: Axial MRI Diffusion weighted image (A) and apparent diffusion coefficient (B) obtained 3 days after surgery showing extensive areas of restricted diffusion involving the gray matter of the cerebral hemispheres bilaterally right more than left consistent with cortical ischemia.](image)

CLINICAL COURSE
Ten days after surgery, our patient continued to be ventilator dependent requiring a tracheostomy. Neurological evaluation revealed continued unresponsiveness to verbal stimuli. Cranial nerves showed no facial asymmetry and 3 mm pupils bilaterally which were reactive. Motor testing showed a left hemiplegia and a right hemiparesis. Palliative medicine was involved for continued support and plans for long term care.

DISCUSSION
Early complications associated with laparoscopic gastric procedures are pulmonary embolism and death which are both <1% respectively. Late complications include gastric prolapse, band slippage, and access port problems. Saunders et al mention that technical complications due to surgery (such as perforation, bleeding, stricture, bowel obstruction etc) are the leading reasons for readmission after bariatric surgery. VAE is the entrainment of air into the venous system producing a broad array of outcomes such as circulatory obstruction. A circulatory arrest occurs ultimately due to the trapping of air in the right ventricular outflow tract. Large emboli may cause arterial embolization by acutely increasing the right atrial pressure and facilitating a right to left shunt through a PFO. Gas embolism can occur through a tear in a vessel on the abdominal wall or on the peritoneum. This can occur due to inadvertent placement of Veress needle into a vein or an organ. In patients undergoing gastrointestinal and urologic laparoscopic procedures, the incidence of major vascular injuries is approximately 0.03 to 0.06 %. Vascular complications occur due to instrumentation particularly during insertion of the Veress needle or tocar. The insertion of Veress needle or trocar into major vessels such as aorta, common iliac, or inferior vena cave have been reported. Injuries to the vessels in the abdominal wall (such as epigastric vessels) are becoming increasingly common due to the use of multiple trocars. Stretching of vascular adhesions because of the expansion caused by pneumoperitonium can tear vessel walls and lead to bleeding. Marked embolism is noted in the distal inferior vena cava occlusion or when there has been significant blood loss. In addition manipulation of the venotomy hole and higher intraperitoneal pressures leads to higher degree of embolization. Material coming from the IVC is directed against the fossa ovalis, causing paradoxical embolization if the foramen ovale is open. Approximately 27% of the adult population is known to have a PFO, which tend to increase with age. This risk can be assessed with TEE.

The presenting signs of gas embolism during laparoscopy include sudden hypotension, hypoxemia, tachycardia and pulmonary edema. Neurologic impairment can occur because anoxic damage or paradoxical embolism through a PFO. Clinically significant gas embolism is rare during gynecologic laparoscopic procedures. In contrast, emboli are seen at a higher rate in laparoscopic cholecystectomy and nephrectomy. The degree of embolization is thought to be proportional to the decrease in central venous pressure from blood loss or distal venous compression, the time the venotomy was open, the intraperitoneal pressure, the amount of manipulation during repair. Factors that may
decrease the incidence of gas embolism include increase in central venous pressure due to adequate hydration, head-down position as it may reduce gas embolism to the head as bubbles are buoyant.\textsuperscript{[5]} Tuppurainen et al used TEE to assess hydration. The movement of the mobile part of the interatrial septum can provide information on the volume status of the patient. Hypovolemia can bend the septum to the left. By expanding the intravascular volume the shunt can be reduced.\textsuperscript{[6]} Management involves expeditious control of bleeding, distal and proximal compression or vascular clamping.\textsuperscript{[5]} This brings up the discussion of routine use of TEE during the procedure to assess the volume status of the patient as well as to monitor other entities such as air embolism and valvular regurgitation which could cause hemodynamic compromise.\textsuperscript{[5,7]} The other alternative would be to perform a pre-operative transthoracic echocardiogram with saline infusion to evaluate for a PFO which may pose a risk for development of complications during surgery.

REFERENCES

Successful Simultaneous Laparoscopic Hand-Assisted Bilateral Nephrectomy And Living Donor Kidney Transplantation For Polycystic Kidney Disease

Lena Sibulesky, MD
Darrin L. Willingham, MD
C. Burcin Taner, MD
Dana K. Perry, MD
Justin H. Nguyen, MD

Division of Transplant Surgery, Department of Transplantation, Mayo Clinic, Jacksonville, Florida

Corresponding author:
Justin H. Nguyen
Division of Transplant Surgery
Department of Transplantation
Mayo Clinic
4500 San Pablo Road
Jacksonville, Florida 32224
Tel: (904) 956-3261
Fax: (904) 956-3359
Email: nguyen.justin@mayo.edu

SHORT SUMMARY
Laparoscopic nephrectomy is the procedure of choice for patients with polycystic kidney disease and can be done pre-, concomitantly, or post kidney transplantation. In our case report we describe a technique of simultaneous bilateral laparoscopic hand-assisted nephrectomy for polycystic kidney disease at the time of living donor kidney transplantation.

ABSTRACT
Adult polycystic kidney disease leads to end-stage kidney disease in more than 40% of people. There are several indications for nephrectomy, including uncontrolled pain, urinary tract infections, bleeding, and large size of the kidneys preventing placement of the renal allograft. Laparoscopic nephrectomy is the preferred approach. We describe a technique of simultaneous laparoscopic hand-assisted bilateral nephrectomy and living donor kidney transplantation.

Polycystic kidney disease (ADPKD) is an autosomal dominant disorder, found in approximately 1 in every 400 to 1000 live births.[1] More than 40% of these patients develop end-stage renal disease. The affected patients may present with flank pain, renal insufficiency, and hypertension. Bilateral nephrectomy is indicated in patients who have severe medically uncontrolled pain, urinary tract infections, bleeding, and large size of the native kidneys preventing placement of renal allograft.[2] Laparoscopic nephrectomy is the procedure of choice for patients with ADPKD and can be done pre-, concomitantly, or post kidney transplantation. In our case report we describe a technique of simultaneous bilateral laparoscopic hand-assisted nephrectomy for ADPKD at the time of living donor kidney transplantation.

CASE REPORT
Patient is a 36-year-old Caucasian female who was diagnosed with polycystic kidney disease 10 years prior and was initiated on hemodialysis 2 months prior to presentation to our hospital. Her other past medical history was significant for hypertension and Cesarean section. She had no history of hemorrhage or infections of the cysts, however she did complain of pain and discomfort from enlarged kidneys. A living donor became available and the decision was made to perform simultaneous bilateral laparoscopic hand-assisted native bilateral nephrectomy at the time of kidney transplantation.

The patient was placed and secured supine on the operating room table. A midline incision of approximately 7 cm was made above the umbilicus for a GelPort placement (Applied Medical Resources, Rancho Santa Margarita, CA, Ref # C8XX2NONCE), Figure 1. Twelve-mm trocars were placed in the midclavicular and anterior axillary lines just lateral to the umbilicus on the left side of the abdomen. Another 12-mm trocar was placed in the midline below the xiphoid midclavicular line on the right side of the abdomen. The operating table was rotated approximately 30 degrees up and to the right. Harmonic scalpel was used for the entire dissection. The left colon was mobilized,
exposing the left kidney. The ureter was identified and divided. The kidney was fully mobilized. The hilum was isolated and both renal artery and vein were divided together with an endovascular stapler (ENDO GIA, US Surgical Corp., Norwalk, CT). The left adrenal gland was identified and preserved. Some of the cysts required drainage prior to extraction of the kidney through the hand port. The patient was rotated approximately 30 degrees up and to the left. The right nephrectomy was performed in a similar fashion after mobilizing the right colon. Both vascular stumps were examined and appeared intact. After obtaining complete hemostasis, a separate curvilinear incision was made in the right lower quadrant for placement of the living donor kidney in the retroperitoneal position. After reperfusion of the kidney, urine was observed on the table. Both procedures together lasted 5 ½ hours. The estimated blood loss was 150 cc, requiring no blood transfusions. Anatomy of the left native kidney was 23 cm x 12 cm x 8 cm and weighed 1,136 grams. The right kidney was 19.5 cm x 10.5 cm x 6 cm and weighed 1,244 grams. Both kidneys had innumerable cysts measuring up to 4 cm in greatest dimension. The patient’s creatinine on admission was 6.6 mg/dL, decreasing to 0.9 mg/dL the day of discharge. The patient did excellent without complication and was discharged home on postoperative day 5. Thymoglobulin was used on induction, and her immunosuppressants are Prograf and Cellcept. Currently 7 months postoperatively, she is doing well and her creatinine remains 0.9 mg/dL.

DISCUSSION
Laparoscopic nephrectomy is the procedure of choice for symptomatic patients with autosomal dominant polycystic kidney disease. It has been shown that compared with open procedure, laparoscopic nephrectomy is associated with significantly less blood transfusion requirement, analgesia requirement, and shorter hospital stay. Concomitant nephrectomy and kidney allograft transplantation has several advantages over staged procedures. It requires administration of single anesthesia, single hospital stay, and avoids dialysis if nephrectomy is done prior to transplantation. Tabibi et al. reported that open concomitant approach was reasonable and safe in this population group. Glassman et al. found open simultaneous approach to have similar risk of morbidity and mortality as well. Interestingly, in addition the satisfaction rate was higher in these patients.

We report a case of a concomitant laparoscopic hand-assisted bilateral nephrectomy performed at the time of living donor kidney transplantation. In our case the blood transfusion requirement, pain control, hospital stay, and allograft function was similar to our average living donor kidney transplant population. Laparoscopic nephrectomy of polycystic kidneys does require advanced laparoscopic skills; however, as in our case, simultaneous procedures can be successful and should be considered in patients with symptomatic polycystic disease.

REFERENCES
Adjustable Gastric Band Erosion: Endoscopic, Laparoscopic, or Open Approach? A Case Report and Literature Review

Fernando Miranda, MD, FACS  
Audencio Alanis, MD

Department of Surgery  
Surgery Specialty Hospitals of America  
Pasadena, Texas

ABSTRACT
The adjustable gastric banding is a purely restrictive procedure that continues to grow in popularity. Gastric band erosion is a well described complication with still a controversial approach of treatment including endoscopy, laparoscopy, and laparotomy. A case report of an adjustable band erosion is presented along with a comprehensive literature search with emphasis on the described approaches for removal. When suspicion of an erosion arises, endoscopy is the most effective method of diagnosis. An attempt to remove the band through endoscopy if most of it is eroded into the stomach lumen. Laparoscopy is the next option followed by laparotomy. The patient was first diagnosed through endoscopy and later explored with the laparoscope. Due to the erosion being at the anterolateral aspect of the stomach, the decision was made to repair the gastrotomy using the open approach. This systematic approach followed in this case report and described literature is a safe approach for band removal.

PURPOSE
More than one method is described for the removal of the eroded gastric adjustable band. A case report is described with emphasis on the intraoperative decision-making of the appropriate approach for band removal.

INTRODUCTION
Bariatric surgery cases continue to increase as the obesity epidemic reach record numbers.[1,4,6,7,10,12,13,14] The adjustable gastric banding is a purely restrictive procedure that continues to grow in popularity due to its low mortality, reversibility, simplicity, and prompt recovery.[1,12,14] Complications of the adjustable gastric band include gastric slippage, port inversion, tubing detachment, port infection, esophageal dilatation, pouch dilatation, band erosion, pulmonary embolism, among others.[3,4,8] Gastric band erosion is a well described complication with still a controversial approach of treatment.[5] A described conservative approach is endoscopic removal of the bands when most of it has eroded, followed by close observation and early discharge. Another approach is by laparoscopy oversawing the gastric defect after band removal. The combined endoscopic/laparoscopic approach has been described with good results. Finally, the approach by laparotomy has been described as the last resort when the circumstances are deemed too difficult for the above two procedures. Few articles in the literature describe the technique of removal and the circumstances that lead to their approach. The current article presents a patient with a gastric band erosion retrieved by laparotomy.

CASE REPORT
The patient is a 22 year old Caucasian female with a BMI of 39.5 Kg/m2. Her comorbidities included type 2 diabetes mellitus, hypertension, osteoarthritis, and gastroesophageal reflux disease. She received an adjustable gastric band (Lap-Band, Allergan) with no intraoperative complications. Three months later, she was seen for chest pain, nausea, and vomiting. These symptoms were attributed to
her 2 mL of saline in her port. Her symptoms resolved after all fluid was removed. She was lost to follow-up, when she reported one year after her initial surgery with epigastric abdominal pain, vomiting, and minimal nausea. She denied additional symptoms of hematemesis, hematochezia, melena, or recurrence of her chest pain. Restriction was still present, but decreased from the time her reservoir’s saline was removed. An esophagogastrscopy was performed showing a 30-40% eroded adjustable gastric band in the stomach lumen. The decision was made to remove the band laparoscopically. Upon entering the peritoneal cavity, significant inflammation was encountered in the upper abdomen. Adhesions were incised, and after the band was released at the buckle, it was removed from the stomach. The band was noted to have eroded on the left lateral aspect of the stomach, were the fundus was folded over the band, with the defect seen under the fold with the proximal end unable to be seen. The decision was made to perform the repair performing laparotomy. The defect was closed in two layers, drains and nasogastric tube placed. The patient did well postoperatively. The nasogastric tube was removed on post op day one, and she was started on clear liquids the next morning. Her diet was slowly advanced, and was discharged from the hospital on post operative day five. She was seen a week after discharge, having developed a wound infection treated with dressing changes.

**DISCUSSION**

The described incidence of adjustable band erosion is 0.3 to 11%. Our patient’s presentation was epigastric abdominal pain and nausea one year after band placement. Silecchia described an erosion rate of 7.5% with minimal or no presenting symptoms done by periodic EGD surveillance. However, presentation is varied from lack of symptoms to peritonitis, arterial bleeding, small bowel obstruction, or esophageal erosion. Several causes have been proposed: infection, band overinflation, gastric wall injury, gastric wall ischemia, use of NSAIDs, smoking, and alcohol consumption. Our patient presented three months after her initial surgery with proximal gastric obstructive symptoms, and removal of fluid resolved her symptoms. The possibility of overinflation remains as a cause. One year after her surgery, she presented with symptoms raising the suspicion of band erosion. The patient denied consuming NSAIDs or alcohol, but admitted being a one pack-per-day smoker.

The diagnosis is done with endoscopy, upper gastrointestinal imaging, or CT scan. During work up endoscopy is recommended to evaluate the extent of erosion.

The treatment of gastric erosion of an adjustable gastric band is removal with gastrotomy repair. Different approaches have been described including endoscopic, laparoscopic, and open. Endoscopic removal is considered for bands mostly eroded into the stomach. Laparoscopic removal is recommended for bands partially eroded. The most commonly described method is removal with gastric oversaw. Karmali describes a transgastrotomy removal through a distal gastrotomy due to extensive inflammation around the band. The patient presented in the current paper was approached laparoscopically initially. After the band was removed, the erosion was identified at the left anterolateral aspect of the stomach extending under the gastric fold created at the initial placement. Furthermore, the extent of this erosion was difficult to evaluate laparoscopically. Part of the gastric fold was taken down laparoscopically. Release of the most proximal suture close to the esophagus was deemed difficult due to the extensive inflammation in the area. The decision was made to perform the rest of the operation though laparotomy. The erosion was exposed and closed in two layers. This systematic approach in the presented case and described literature is safe for the successful removal of the eroded gastric band.

**CONCLUSION**

Open gastrotomy repair is a safe method of gastrotomy repair once endoscopic and laparoscopic approaches are deemed difficult or unsafe for completion of the eroded lap band removal procedure.
ADJUSTABLE GASTRIC BAND EROSION

REFERENCES


Closure of the Perforated Gastric Ulcer Using the Round Ligament of Liver, Pathologically Changed Due to Ulcer Penetration: Report of a Case

Yuri N. Shiryajev, MD1,2
Maria A. Bernstein, MD1,2
Vladimir D. Evstratov, MD2
Elena V. Bulanova, MD3
Mikhail A. Protchenkov, MD1,2

1) Department of Faculty Surgery named after Professor A.A. Rusanov, Saint-Petersburg State Pediatric Medical Academy, Saint-Petersburg, Russian Federation
2) Sixth Department of Surgery, Mariinsky Hospital, Saint-Petersburg, Russian Federation
3) Department of Anesthesiology, Mariinsky Hospital, Saint-Petersburg, Russian Federation

Corresponding author:
Yuri N. Shiryajev, MD
Assistant Lecturer
Department of Faculty Surgery named after Professor A.A. Rusanov
Saint-Petersburg State Pediatric Medical Academy
Litovskaya str., 2
194000 Saint-Petersburg, Russian Federation
Tel: +7 (812) 2757362
Fax: +7 (812) 2757326
E-mail: shiryajev@yandex.ru

SHORT SUMMARY
We report a rare case of gastric ulcer with penetration into the round ligament of liver. After disconnection of the ligament from the gastric wall the patient was admitted urgently with symptoms of perforated ulcer. Its closure was carried out using pathologically changed round ligament—for the first time in the literature.

ABSTRACT
Penetration of the gastric ulcer into the round ligament of liver (RLL) is rare. We present a case of perforation of gastric ulcer, previously penetrated into the RLL, and the RLL was used for perforated ulcer closure. The female 47-year-old patient was admitted urgently with the symptoms of peptic ulcer perforation. Large perforated ulcer of distal stomach, partially covered with the RLL, was found at the operation. On the dorsal surface of the RLL marks of previous ulcer penetration were clearly seen. We refuse the distal gastrectomy in favor of perforation closure due to severe patient’s condition and persisted hypotension. Perforation was closed in one row of single sutures and then reinforced with the RLL patch. The RLL was turned to the stomach with the ventral surface, and area of ulcer penetration remains outside. No serious complications were observed. Sixteen months later the patient was operated on repeatedly (distal gastrectomy by Finsterer) for marked pyloroduodenal stenosis with good result.

We believe that the presented case is the first report of plastic use of the RLL, pathologically changed due to ulcer penetration.

KEY WORDS: perforated peptic ulcer, penetration, round ligament of liver

ABBREVIATIONS: RLL, round ligament of liver; PUD, peptic ulcer disease

INTRODUCTION
The role of the round ligament of liver (RLL) in clinical, pathological and surgical aspects of peptic ulcer disease (PUD) is not significant. In our opinion, there are only two «crossing fields» of the RLL and PUD. First, the RLL may be object of PUD extension. However, penetration of gastric ulcer into the RLL is a very rare type of such a complication. As far as we are concerned there is only one case described in literature.1) Secondly, it is possible to use RLL in PUD surgery, mainly, as a plastic material. Utilization of the RLL was described for duodenal stump closure in distal gastrectomy,2,3 duodenoplasty after ulcer excision.4) Bibliography regarding perforated ulcer closure with the RLL patch is more extensive, but the number of published cases is relatively small.5–10}
The aim of this article is to present an interesting case, which demonstrates both the options of clinically significant relationship of the RLL and PUD. The RLL, pathologically changed due to previous gastric ulcer penetration, was used for perforated ulcer closure. We believe, this is the first such case described in literature.

CASE REPORT
The female patient S., 47-year-old, was admitted urgently to our hospital on March 01, 2007 with the symptoms of peptic ulcer perforation. Prior to admission she has developed severe abdominal pain which lasted for 4.5 hours. Abdominal radiography showed free air under the diaphragm. Initial assessment of the patient revealed marked hypotension (65/40 mm Hg). Past medical history (information was given by the patient’s daughter) included migraine for the length of time which deteriorated recently. She was taking peroral analgesics for the past several months almost every day and at some point started to complain of constant epigastric pain for past three months.

Urgent operation was carried out. Upper median laparotomy. Considerable amount of muddy exudate with fibrin clots and threads was present in the abdominal cavity. Large perforated ulcer was located at the anterior wall of distal stomach and was partially covered with the RLL. After complete division of round ligament from the stomach we noted: the size of perforation was 30 x 18 mm, edges were dense and friable. On the dorsal surface of the RLL signs of previous penetration were clearly seen (Fig. 1).

Thus, the ulcer has penetrated into the RLL over the period of time, and after disconnection of the latter from the gastric wall turned to perforated. Indications for distal gastrectomy were dictated by severity of ulcerous process and its complicated character. But we were forced to refuse this operation in favor of simple closure due to severe patient's condition and persisted hypotension. Standard ulcer closure with two rows of sutures might have led to gastric outlet obstruction. After ulcer edge excision (for biopsy) perforation was closed in one row of single sutures. The RLL was mobilized, placed upon the suture line and fixed to the stomach wall. For better realization of plastic possibilities of the RLL it was turned to the stomach with the ventral surface. Penetration area remains outside (Fig. 2). Abdominal cavity was washed thoroughly and drained.

Postoperative course was quite uneventful. During the first postoperative week mild nausea and hiccup were observed, but have been resolved after conservative treatment. On 13th day the patient was transferred into the health resort for subsequent treatment. We have planned to admit the patient again for the control check up to decide on another surgical procedure if necessary, unfortunately the patient defaulted from our follow up. Sixteen months later she was admitted for marked pyloroduodenal stenosis. Distal gastrectomy by Finsterer was performed successfully. After the six months since the operation patient has improved and never complained of abdominal pain.

DISCUSSION
Penetration of gastric ulcer into the RLL is the very rare variant of this complication. We have found only one paper on this subject. Belgian authors presented one clinical case. The patient was a young woman, who have used for a long time analgesics for migraine (similar to the patient in our case) and corticosteroids for hypothyroidism. Radiologic examination following the complaints of abdominal pain revealed a large gastric ulcer. It was located on anterior gastric wall and penetrated into the RLL. Distal ⅓ gastrectomy en bloc with the RLL and vagotomy were performed.
Use of the RLL as a plastic material in surgery of PUD (and in gastric surgery in general) is described more extensively. Round and falciform ligaments of liver are used for closure of difficult duodenal stump,\cite{8,9} reinforcement of suture line in duodenoplasty,\cite{8,9} distal\cite{8,9} and total\cite{8,9} gastrectomy. Though it is more beneficial to use this plastic material for perforated ulcer closure.

Varys authors have been using different techniques of perforated ulcer closure with the RLL. R.J. Doerr et al.,\cite{7} D.E. Fry et al.,\cite{8} F.T. Jordan et al.\cite{10} fixed the mobilized RLL upon perforation similar to Graham’s omentoplasty.\cite{8,9} D. Davila and B. Narbona fixed the RLL patch with four all-thickness U-shaped sutures, placed in a crown-fashion – below through the duodenal wall, above – through the round ligament.\cite{8,9} We have used the different technique – after perforation closure in one row of single sutures peritonization of this suture line with the RLL was carried out. In our opinion, this technique is more reliable in aspect of prevention of possible leakage. We have published two our cases in local proceeding book.\cite{13} Each ulcer was chronic, the area of perforation – fairly large, but risk of gastrectomy was unacceptably high – due to the worsening of general conditions and/or severity of peritonitis. The choice of the RLL for perforated ulcer closure was based on the current circumstances which made impossible the usage of the omental patch. In the first case omentum was massive, inflamed and friable; sutures cutted through its tissue easily. In the second patient, who was liberated from the jail, major omentum was very thin, fatty tissue – almost absent, and omentoplasty of perforation would not be reliable, in fact it was impossible. Unfortunately, both patients died of massive bleeding from sutured ulcer, on 13th and 5th day, respectively. Secure, rigid attachment of the RLL with the gastric wall was confirmed at the autopsies. That fact defined the further use of the RLL in perforated ulcers, and in reported case this technique was used as a method of choice.

The most of surgeons use the major omentum, but not the RLL for plastic closure of perforated ulcers. However, some authors showed their preferences of the RLL over the omentum in this aspect. In severe peritonitis omentum can be oedematous, friable and unsuitable for using it as a patch for perforated ulcer closure.\cite{8,9,10} Sometimes the major omentum is too thin, cicatrifiedly changed or firmly attached the pelvis as a result of previous surgical procedures.\cite{8,9,10} The size and mechanical durability of the RLL are more constant. Therefore, some colleagues have used the RLL instead of omental patch in perforated ulcers.

Some cases, similar to our, were published earlier. In all those reports surgical circumstances – large ulcer, severe condition and/or old patient’s age (gastrectomy was too risky), forced perforation closure – were the same.\cite{8,9,10} As D. Fry et al.,\cite{8,9} we were constrained to operate on the patient secondarily for gastric outlet obstruction. Yet, we would like to believe that the presented case is the first report of plastic use of the RLL, pathologically changed due to ulcer penetration.

In summary, we hope to draw our colleague’s attention to good plastic properties of the RLL for perforated ulcers closure. This method is not indicated for the routine implication, because it is not necessary.\cite{13} But this technique, which is rarely used and until now little-known in common practice, can help in difficult surgical situations.

REFERENCES

Retroperitoneal Bronchogenic Cyst
Masquerading as an Adrenal Mass, Successfully Treated with Hand-Assisted Laparoscopic Surgery

Nelly Tan, MD
Deba Sarma, MD
Julie Ann Sosa, MD
Eyiyemisi Damisah, BA
Sanziana Roman, MD

Department of Surgery
Yale University School of Medicine
New Haven, CT 06520

SHORT SUMMARY
Retroperitoneal bronchogenic cysts are rare in adults. This is the first case-report of a retroperitoneal bronchogenic cyst successfully resected using trans-abdominal hand-assisted laparoscopic technique. A review of the literature is presented.

ABSTRACT
Retroperitoneal bronchogenic cysts are rare in adults. We present a patient with a known longstanding adrenal mass and increased back pain with hip flexion. Hand-assisted laparoscopic resection documented a separate bronchogenic cyst. We present the case and review the literature.

CASE REPORT
A 69 year old woman presented to her physician with complaints of vague abdominal and back pain, especially with hip flexion. The patient was taking no medications and was otherwise in good health. She was known to have a left adrenal mass, which had been discovered a decade earlier, and was documented to be stable at 3.5 cm several years before her current presentation. Prior hormonal biochemical evaluation was not available at the time of presentation.

On examination, she was well-appearing, with stable vital signs. Her physical examination was unremarkable, except for vague discomfort in the left abdomen with hip flexion. Adrenal hormonal evaluation only showed very mild elevation of urinary metanephrines. The patient underwent repeat adrenal computed tomography (CT) scanning, documenting a growing left adrenal mass, measuring 5 cm (Figure 1). Non-enhanced CT density was measured at 35-40 Hounsfield Units (HU). A meta-iodo-benzyl-guanidine (MIBG) scan was negative.

The patient underwent a hand-assisted laparoscopic resection of the mass. Intra-operatively, the mass was easily separated from the adrenal gland. It appeared to originate from the psoas or the paraspinal muscles. It was adherent to the paraspinal muscles and vertebral body, but was resected in toto. Ex-vivo evaluation showed a cystic mass containing viscous, light greenish fluid (Figure 2). Pathologic examination revealed a benign retroperitoneal cyst lined by respiratory epithelium with cartilage and...
bronchial glands consistent with a bronchogenic cyst (Figure 3). The patient did well post-operatively, and was discharged home after two days.

COMMENT

Retroperitoneal bronchogenic cysts are uncommon, and their incidence is represented by a few cases described in the literature. They are congenital and derive from abnormal separation of buds from the tracheobronchial tree during fetal development. More commonly, they occur in the posterior mediastium. In the retroperitoneum, the subdiaphragmatic area is the most common site of development. Bronchogenic cysts usually are discovered incidentally; they have no consistent clinical presentation. Most have been thought to represent adrenal masses pre-operatively. When this was the case, patients underwent standard biochemical evaluation for pheochromocytoma, Conn’s syndrome, and hypercortisolism; these proved to be unremarkable. Biopsy has not been reported, as there was never concern for malignancy or metastatic disease. Bronchogenic cysts in the retroperitonium can be complicated by infection, perforation, and pain stemming from the cyst compressing adjacent organs. The treatment of choice is laparoscopic surgical resection.

This is the first reported case of a retroperitoneal bronchogenic cyst followed for over a decade. Initially, it was thought to represent a benign adrenal mass. This case demonstrates that these entities can be slow-growing. Eventually, they can reach a size that leads to compressive symptoms, including back or flank pain. Retroperitoneal bronchogenic cysts should be included in the differential diagnosis of a retroperitoneal mass. Given their viscous contents, these cysts may have higher HU on CT examination, and they may have mild enhancement with intravenous contrast administration, raising the suspicion for intermediate-risk lesions. They also may be mistaken for pancreatic mucinous tumors. The differential diagnosis of a retroperitoneal mass should include an adrenal mass (pheochromocytoma, adenoma, and adrenocortical carcinoma), paraganglioma, pancreatic cyst, sarcoma, lymphoma, lipoma, metastatic tumor, neural-based tumor, cyst of the foregut or urogenital origin, teratoma, dermoid cyst, bronchopulmonary sequestration, fibromatosis, and lymphangioma.

Definitive pre-operative diagnosis of retroperitoneal bronchogenic cysts can be challenging. On CT, they present as well-rounded, sharply demarcated, hypo-attenuated masses with HU from 20-130 due to their high protein concentration. This feature also can lead to reduction in T1 relaxation time on magnetic resonance imaging (MRI) and high signal intensity on T2 weighted imaging. Benign neuroendocrine tumors and malignant adrenal lesions also show high-signal T2 qualitative images on MRI. However, the integration with in- and out-of-phase chemical-shift sequences helps to differentiate adrenal adenomas from other lesions. Post-gadolinium T1 images allow adenomas, cysts, and myelolipomas to be distinguished from pheochromocytomas and malignancies. Bronchogenic cysts may be difficult to differentiate pre-operatively from benign cysts, lymphangiomas, and ganglioneuromas.
This is the first description of a retroperitoneal bronchogenic cyst removed with a hand-assisted laparoscopic trans-abdominal approach, and it is just the eleventh case to be reported following laparoscopic resection. The hand-assisted technique permitted early intra-operative appreciation that the lesion was separate from the left adrenal gland; unnecessary adrenalectomy was avoided, and the operation was significantly expedited. All retroperitoneal bronchogenic cysts reported in the literature following laparoscopic resection were located adjacent to the adrenal gland on the left side. All were hormonally inactive. Two patients had an en bloc adrenalectomy, and one patient required a distal pancreatectomy. Most cysts were adherent to local tissues. Both trans-abdominal and retroperitoneal surgical approaches have been described in the literature. 

In summary, retroperitoneal bronchogenic cysts are uncommon. They usually are incidentally identified on surveillance cross-sectional imaging. Slow growth, normal hormonal studies, and characteristic findings on CT and MRI suggest a benign process. Surgery is the preferred treatment to avoid infectious complications or symptoms of compression. Laparoscopy or hand-assisted laparoscopic techniques can facilitate resection and avoid unnecessary en-bloc adrenalectomy.

REFERENCES

Macrodactylyia and Intestinal Lipomatosi

Ghaith Khair, MD
Metropolitan Group Hospitals
Residency in General Surgery

Charan Singh, MD
Radiology Resident

Sheila Major, MD
Radiology Attending

Matthew J. Hyser, MD, FACS
General Surgery
St. Francis Hospital, Evanston, IL

ABSTRACT
Intestinal lipomatosi is a rare disorder affecting the small intestine. Symptoms when present are vague and common complications include intussusception, pain, malabsorption, bleeding, or volvulus. Macrodactylyia fibrolipomatosi is also an unusual condition affecting the hands and feet producing massive digital hypertrophy and deformity. Two prior case reports document these two conditions occurring simultaneously. We report a third instance of a 69 year old male presenting with small bowel obstruction, intestinal lipomatosi, and macrodactylyia fibrolipomatosi together with jejunal diverticulosis. Exploratory laparotomy and small bowel resection led to resolution of the obstruction.

INTRODUCTION
Lipomas are a common benign tumor of the small intestine. Most are solitary and asymptomatic, however; multiple lipomas can involve a long segment of the small intestine. Multiple intestinal lipomatosi was first described by Hellstrom in 1906. Since then, thirty one cases of diffuse small intestine lipomatosi have been reported worldwide with the ileum being most commonly affected. While occasionally found suberosally, most lipomas are located within the submucosal layer of the bowel wall. Endoluminally, they may appear as polypoid or pedunculated lesions.

Macrodactylyia fibrolipomatosi is an uncommon anomaly of the extremities affecting the fingers and toes. Hands are more commonly involved than feet. The digits are abnormally large due to fibrofatty infiltration of soft tissue along with bony hypertrophy. The most frequently involved digit of the hand is the index finger.

The presence of the two conditions arising simultaneously is extremely rare, with only two prior case reports describing the combination of macrodactylyia and small intestinal lipomatosi.

CASE REPORT
A 69 year old Chinese farmer immigrated to the United States 10 years ago. On a prior admission in 2007 for vague abdominal complaints, a CT scan of the abdomen demonstrated diffuse small intestinal lipomatosi and lipomatous changes involving the colon wall. A colonoscopy at that time did not demonstrate mucosal involvement with lipomatous change and a barium contrast study revealed multiple radiolucent masses projecting into the jejunal lumen (Figure 1). He now presents with a four day history of abdominal fullness, obstipation, along with nausea and vomiting.

His past medical history includes coronary artery disease, hypertension and hyperlipidemia while past surgical history included a urological procedure performed in China. Medications were valsartan, simvastatin, metoprolol, and isosorbide.

Figure 1: Barium study of small bowel shows multiple smooth-walled radiolucent masses (*) projecting into the jejunal lumen.
On examination his vital signs were within normal limits. He had an obvious deformity of his left hand consisting of massive hypertrophy of the fourth and fifth fingers (Figure 2). His abdomen was distended but non-tender. Laboratory findings were within normal limits. In the emergency department an abdominal x-ray was performed which demonstrated dilated small bowel loops and stool in a decompressed colon. CT scan of the abdomen and pelvis demonstrated diffuse fatty infiltration of the small bowel with multiple polypoid lesions within the lumen of the proximal and mid small bowel, and acute small bowel obstruction. Lipomas were also present in the decompressed colon wall (Figure 3).

A nasogastric tube and Foley catheter were placed, and after resuscitation, the patient was taken to the operating room for an exploratory laparotomy. Operative findings demonstrated a short segment of normal proximal jejunum from the ligament of Treitz extending for several centimeters at which point the bowel became thickened and dilated with a marked change in caliber. The proximal jejunum contained multiple wide mouth diverticulae along the antimesenteric border. Finally there were innumerable lipomatous changes found throughout the jejunum and ileum up to the point of obstruction while the terminal most ileum was decompressed and relatively spared of this process (Figures 4 & 5). The obstructing segment of the small bowel was resected and primary anastomosis was performed. The patient had an uneventful post operative course and was discharged from the hospital with normal bowel function. The final pathology report showed multiple, confluent submucosal and intramuscular lipomas in the resected segment (Figure 6).

DISCUSSION
Small intestinal lipomatosis is rare with only 31 reported cases. Symptoms when present are often vague and complications include intussusception, chronic abdominal pain, malabsorption, bleeding, volvulus, or obstruction.\[^{2,5,7,8}\]

Figure 2: Left hand picture and radiograph shows hypertrophy and deformity of digits with ankylosis of interphalangeal joints along with sclerosis, cortical thickening and medullary cystic change.

Figure 3: Axial CT images show diffuse fat infiltration of bowel wall (white arrows) in addition to several sharply marginated radiolucent ovoid filling defects within lumen of small bowel outlined by contrast material. The proximal small bowel loops are dilated with non distended large bowel suggesting distal small bowel obstruction.

Figure 4: Dilated small bowel loops with transitional point – note extraluminal fatty changes.

Figure 5: Several large mouth proximal jejunal diverticulae seen on the antimesenteric border associated with lipomatous changes externally.
The associated presence of small intestinal lipomatosis and macrodactyly fibrolipomatosis is an even rarer occurrence with only two prior case reports. In one case the patient presented with chronic abdominal pain, and his hand examination showed hypertrophy of the left thumb, index and middle fingers with firm fusiform nodules of the soft tissue of the palm. This patient underwent a laparotomy and was found to have jejuno-jejunal intussusception and multiple submucosal tumors extending from the ligament of Treitz to the mid small bowel. The intussusception was reduced and multiple enterotomies were performed with resection of the largest tumors.

The second patient presented with a ten year history of malabsorption. An upper gastrointestinal study and a CT scan of the abdomen demonstrated multiple lipomas of the small bowel. At operation the largest lipoma was resected to prevent intussusception. This patient had macrodactyly fibrolipomatosis of his left thumb. In each case the left hand is involved suggesting a common somatic genetic mutation.

Our patient had multiple large mouth proximal jejunal diverticulae located eccentrically on the antimesenteric border in addition to macrodactyly and intestinal lipomatosis. Lipomatosis associated with jejunal diverticulosis has been described previously but not with macrodactyly. When present, diverticulosis has not been a source of complications. The left hand macrodactyly involved digits four and five while prior case reports described thumb, index, or middle finger changes.

Barium contrast studies maybe helpful but CT scanning is the best imaging test to diagnose, determine the extent, and assess for complications from this unusual disease process. The CT differential diagnosis would include multiple polyposis syndromes, lymphoma, neurofibromas, multiple hemangiomas, mesenteric masses, and metastatic lesions. Additional possibilities include late stage ulcerative colitis and post radiation change. CT is preferred for its ability to recognize homogeneous fat attenuation characteristic of lipomatous masses within the bowel wall. Heterogeneous attenuation or increased fat density may suggest liposarcoma.

**CONCLUSION**

Small intestinal lipomatosis and macrodactyly fibrolipomatosis is extremely rare. Our case report is the third to be reported in literature, and is the first case to present with complete small bowel obstruction and large antimesenteric jejunal diverticulosis.
DECEMBER 2010

33rd Hepato-Biliary Symposium
November 5th-7th, 2010

The American Society of Abdominal Surgeons received such overwhelming praise with regard to the hands-on simulation training course conducted at our Clinical Congress; we scheduled another session for the 33rd Hepato-Biliary Symposium held November 5th through 7th, 2010 in Tampa. This training session was held on Friday at USF and consisted of group training, hands-on simulation using pig livers for single incision, laparoscopic cholecystectomy, along with a demonstration of extracorporeal knot tying. Not only was this session extremely education but was very much enjoyed by the doctors and nurse attending.

Two live surgeries were observed on Friday morning: a “Very Floppy LESS Nissen Fundoplication” and a “LESS Toupet Fundoplication”. Other surgeries, along with lectures and videos on LESS Nissen Fundoplication; LESS Heller Myotomy with Anterior Fundoplication; LESS Adrenalectomy and LESS Inguinal Hernia Repair were scheduled into this busy day, working around the group training sessions in the afternoon.

Saturday and Sunday were overflowing with lectures and lively discussions on Pancreatic Cancer — Who, What, Where, How?; Resecting Pancreatic Cancer — How to Improve on the National Standards; Issues in Training — HPB Surgery; Cholecystectomy without General Anesthesia; Benign and Malignant Tumors of the Liver; Bile Duct Injuries — How to Avoid, Recognize & Treat; How to Introduce New Techniques into Your Practice; Trauma to the Liver, Biliary Tree, Pancreas & Spleen; Mass Casualty Care — Mass Casualty Care Relating to the Surgeon; Unexpected Gynecologic Findings during Cystotomy and Colon Resection for Ovarian Cancer; Intraoperative Decisions. Questions abound from the audience when our specialist in Geriatrics, Palliative Care and End-of-Life Studies spoke on Diseases, Disorders & Treatments Impacted by Age — Care in the Elderly; What Organized Palliative Care Offers the Abdominal Surgeon and Specific Issues in Postoperative Care for Abdominal Surgeons — Pain and Mental Status.

Other subject matter included Acute & Chronic Pancreatitis, Who Will Be Your Surgeon and Effects of and Treatment of Inflammatory Bowel Disease Upon Hepatic Function.

We were very fortunate to have such specialists and educators in the fields of Geriatrics, Colorectal Surgery, Trauma & Surgical Critical Care, General Surgery, LESS & N.O.T.E.S. Surgery, Obstetrics & Gynecology and Hepato-Biliary speaking at this meeting.

Dr. C. Whalen Clark received our 2010 Resident Research Award. Dr. Clark came to us with the highest recommendations for his outstanding research and accomplishments in Hepato-Biliary studies and surgery.

For anyone who is not aware, the American Society of Abdominal Surgeons had gone through extensive reporting last year and received the approval of ACCME for a four year re-accreditation through November 30, 2013. This accreditation allows us to conduct educational conferences and designate these activities for AMA PRA Category 1 Credits.

The Society also participated in a five year review by AMA and was notified on October 29, 2010 that ASAS has met the requirements needed to retain its two seats in the AMA House of Delegates. Dr. Louis E. Alliano, Jr. and Dr. Philip McCarthy are the Society’s Delegates at this time.

We are already gearing up for the 49th Clinical Congress which will be held in Tampa April 15th – 17th, 2011 and are hoping to infuse a lecture or two on gynecological diseases, treatments and surgery into our spring program.

We will be electing committee members and officers at this time. If you would like to be added to the ballot or nominate someone for a position, please notify the office as soon as possible (781) 665-6102.

We are attempting to cut back our printing, postage and mailing expenses, therefore, please be sure we have your current e-mail address. In the future, we will be sending out many of our save-the-day meeting notices, etc. by e-mail. Help us to be more efficient in keeping costs down.

The Winter 2010/Spring 2011 Journal of Abdominal Surgery is heading to the printer. If you know of any hospitals, medical libraries or non-members who would like a copy, please contact the office.
In Memory of Louis F. Alfano, Sr. MD
1921 – 2010

The Society recently experienced a great loss as one of its founders, Dr. Louis F. Alfano, Sr., passed away February 14, 2010. After the passing of his brother Dr. Blaise F. Alfano, “Lou” was instrumental in carrying on his brother’s dream of providing superior medical education and improved patient care for not only ASAS members, but all abdominal surgeons at the ASAS study center, “The Foundation for Abdominal Surgery” in Tampa. The gauntlet has now been passed to Louis F. Alfano, Jr., MD to assure that the high standards of teaching will be met in continuing medical education for abdominal surgeons.

The 48th Clinical Congress centered around hands-on virtual training at University of South Florida, using simulators for single-port, laparoscopic cholecystectomy on pig livers. This was a wonderful opportunity as the attendees were given the chance to practice new techniques in a supervised, clinical setting.

Complementing that days training were lectures in: Increasing the Relevance of LESS Surgery; LESS Cholecystectomy; Foregut Surgery; Lessons Learned from 500 LESS Operations – Access, Instrumentation and Imaging.

Adding to this exceptional day, our physicians were recruited to assist in the testing of a new “Subclavial w/pulse” IV Simulator by placing a central line. They were then asked to give their opinion as to its realism and practicality as a teaching tool for Residents.

Rounding off the first day of our conference were three live-feed surgeries; LESS Nissen Fundoplication; Laparoscopic Reduction of Hiatal Hernia & Fundoplication; and a LESS Nissen/Heller procedure.

Dr. Alexander S. Rosenmurgy, II, MD was awarded this year’s Distinguished Service Award by ASAS for his accomplishments and tireless dedication to patient care, endless teaching and research, as well as, his friendship and support of the American Society of Abdominal Surgeons’ CME endeavors.

Saturday and Sunday’s schedule was extensive, covering – Improving Outcome with Antireflux Surgery; Unexpected Findings at Celiotomy/ Laparoscopy; Diseases/Disorders of the Spleen & Surgery; Increasing the Talent Pool in Surgery; Achalasia Stage Impacts Outcome After Heller Myotomy; N.O.T.E.S.; Peptic Ulcer Disease – Gastric/ Duodenal Ulcers; Gastric Cancer; Esophageal Diseases/Disorders – Perforation & Bleeding; Impacting Co-Morbidities of Patients – Age, Cirrhosis, Smoking; Inguinal Hernia Repair & Videos; Incisional Hernia Repair & Videos; Incisional/Ventral Hernia Repairs & Videos; Recurrent Hernias & Videos/Q&A; Advances in Colorectal Cancer; Laparoscopic Approaches to Colorectal Diseases; Ulcerative Colitis – Operative Considerations & Approaches; Indications & Surgery for Crohn’s Disease; Parathyroid Surgery; Thyroid Surgery; Endocrine Surgery Cases/Q&A.

A cocktail banquet held at the close of Saturday’s session, afforded the physicians the opportunity to relax a bit, mingle and discuss much of what had been learned over the past two days.

The American Society of Abdominal Surgeons’ continuing medical education program has been re-accredited by ACCME and holds a four year accreditation until 2013.

Support your organization with your dues, donations and most importantly, your attendance at these conferences.

The American Society of Abdominal Surgeons, Inc. designates this educational activity for a maximum of 20 AMA PRA Category 1 Credit(s)™. Physicians should only claim credit commensurate with the extent of their participation in the activity.
Future Meetings Schedule

In an effort to bring interest and diversity to our CME course schedule, the American Society of Abdominal Surgeons, Inc. would like to offer a variety of courses and locations in the United States through not only our own organization but also through the International College of Surgeons.

The following meetings are available to our members, as well as, all other physicians wanting to attend. Medical residents attend ASAS meetings free of charge with pre-registration and proof of residency.

---

**American Society of Abdominal Surgeons, Inc.**

### 2011

**April 15 – 17, 2011**  
**49th Clinical Congress**  
Dr. Blaise F. Alfano  
Conference & Banquet Center  
Tampa, Florida  
Contact: (781) 665-6102

**November 4 – 6, 2011**  
**34th Hepato-Biliary Symposium**  
Dr. Blaise F. Alfano  
Conference & Banquet Center  
Tampa, Florida  
Contact: (781) 665-6102

### 2012

**April 13 – 15, 2012**  
**50th Clinical Congress**  
Dr. Blaise F. Alfano  
Conference & Banquet Center  
Tampa, Florida  
Contact: (781) 665-6102

**November 2 – 4, 2012**  
**35th Hepato-Biliary Symposium**  
Dr. Blaise F. Alfano  
Conference & Banquet Center  
Tampa, Florida  
Contact: (781) 665-6102

---

**Other Meetings of Interest**

International College of Surgeons  
US Section - 73rd Annual Surgical Update & ICS 42nd North American Federation Congress  
June 8th – 11th, 2011  
Hilton Hotel & Executive Tower, Portland, Oregon  
Contact: Maggie Kearney (312) 787-6274 Ext. 3129 maggiek@americitech.net

---

Please contact our home office for more detailed information.  
Our website will be updated as more information becomes available.

---

American Society of Abdominal Surgeons, Inc.  
824 Main Street, 2nd Floor, Suite 1, Melrose, MA 02176-2711  
781 665-6102 • www.abdominalsurg.org • office@abdominalsurg.org

The ASAS is accredited by the Accreditation Council for Continuing Medical Education to provide Continuing Medical Education for Physicians.
The American Society of Abdominal Surgeons Membership

Today, keeping up in the medical field is not a matter of choice, it is a matter of protecting your patients, as well as, preserving your medical license. Documentation of continuing medical education credits is mandatory in most states to renew your medical license.

For over fifty years the American Society of Abdominal Surgeons, Inc. (ASAS) has aided their members and physicians in the changing practice of surgery through education, consequently assisting physicians in meeting the ever changing needs of their patients. ASAS is accredited by ACCME, the Accreditation Council for Continuing Medical Education to provide up-to-date and appropriate medical education for physicians and other medical staff. The American Society of Abdominal Surgeons, Inc. also sponsors the American Board of Abdominal Surgery, Inc. (ABAS) and the Journal of Abdominal Surgery, Inc. (JAS).

The following credits apply:

1) The presentation of a one hour lecture at one of the ASAS activities:
   The American Society of Abdominal Surgeons, Inc. designates this educational activity for a maximum of 2 AMA PRA Category 1 Credit(s)™. Physicians should only claim credit commensurate with the extent of their participation in the activity.

2) Successful completion of an examination for the American Board of Abdominal Surgery, Inc. or a re-certification examination:
   The American Society of Abdominal Surgeons, Inc. designates this educational activity for a maximum of 25 AMA PRA Category 1 Credit(s)™. Physicians should only claim credit commensurate with the extent of their participation in the activity.

3) Publication of an article in the Journal of Abdominal Surgery:
   The American Society of Abdominal Surgeons, Inc. designates this educational activity for a maximum of 10 AMA PRA Category 1 Credit(s)™. Physicians should only claim credit commensurate with the extent of their participation in the activity.
THE AMERICAN SOCIETY OF ABDOMINAL SURGEONS

Application for Membership

PLEASE PRINT OR TYPE

Date

Name

Please circle MALE FEMALE

Office Address

Telephones: (Office) Fax E-Mail Cell

Residence Address

Place and Date of Birth Marital Status

Spouses Name (optional)

If you need more space to provide information requested, please attach separate sheet.

<table>
<thead>
<tr>
<th>1. Education Undergraduate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. Academic Degree(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3. Medical School and Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4. Internship Hospital?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5. Residency Hospital?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>6. Fellowship Hospital?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>7. Preceptorship Name &amp; Address of Preceptor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>8. Current Hospital Appointments &amp; “Type of Privileges?”</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>9. Past Hospital Appointments?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>COLLEGE/UNIVERSITY</td>
</tr>
<tr>
<td>--------------------</td>
</tr>
<tr>
<td>10. Percentage of your Practice devoted to Abdominal surgery?</td>
</tr>
<tr>
<td>11. Postgraduate studies, last three years. Course sponsors and dates? <em>(use additional paper if necessary)</em></td>
</tr>
<tr>
<td>12. AMA membership?</td>
</tr>
<tr>
<td>13. Membership in other medical Societies?</td>
</tr>
<tr>
<td>14. Board Certification(s) and Certificate #.</td>
</tr>
<tr>
<td>15. Teaching positions, Institution, city, state, date?</td>
</tr>
</tbody>
</table>

**Please Print or Type**

List the names, addresses and telephone numbers of three Surgeons for letters of recommendations.

1. __________________________________________
   __________________________________________
2. __________________________________________
   __________________________________________
3. __________________________________________
   __________________________________________

<table>
<thead>
<tr>
<th>SPECIALTY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abdominal Surgery</td>
</tr>
<tr>
<td>Anesthesiology</td>
</tr>
<tr>
<td>Ob/Gyn</td>
</tr>
<tr>
<td>Pathology</td>
</tr>
<tr>
<td>Radiology</td>
</tr>
</tbody>
</table>

*Attach a list of Published articles on a separate sheet*

I hereby agree that I will abide by the action of the Membership Committee of The American Society of Abdominal Surgeons on this application and that if rejected, I will in no way hold said Membership Committee or The American Society of Abdominal Surgeons, legally responsible for such action.

SIGNATURE ____________________________

Annual dues of the Society are $200 which are PAYABLE UPON NOTIFICATION, by the Membership Committee, that your application has been approved. Complete and mail this application, with a $50 application fee to:

**AMERICAN SOCIETY OF ABDOMINAL SURGEONS, INC.**
Louis F. Alfano Sr., M.D., Secretary/Treasurer
824 Main Street, 2nd Floor, Suite 1, Melrose, MA 02176
(781) 665-6102 • Fax: (781) 665-4127
E-Mail: office@abdominalsurg.org
Web-site: www.abdominalsurg.org
American Board of Abdominal Surgery

PROCEDURE FOR CERTIFICATION

REQUIREMENTS:

1. Completion of a 5 year ACGME accredited general surgery residency.
2. One year Fellowship in minimally invasive surgery; 150 cases, documented.
   OR
   Five years of abdominal surgical practice with a minimum of 750 cases,
   documented, abdominal surgery performed (at least 50% minimally invasive surgery).
3. Quality evaluation:
   License to practice medicine, hospital appointment, current delineation of privileges,
   listing of abdominal procedures performed for the last three years. Morbidity and mortality reports,
   surgical audit (performance outcome), were there any disciplinary actions? If so, your response,
   with dates, cite any malpractice records, list your attendance in continuing medical education
   (specialty specific), a personal interview with members of the Education Committee of the
   American Board of Abdominal Surgery.
4. Qualifying, Written Examination – Part I Required
5. Certifying, Oral Examination – Part II Required

PROCEDURE FOR RE-CERTIFICATION

The Diplomate is expected to send a letter of intent, accompanied be a non refundable fee of $500.00 payable to the
American Board of Abdominal Surgery. This will open his file and initiate the process of re-certification to be completed
within one year.

The following documentation is required:

2. Listing of abdominal procedures performed during the last three years.
4. Surgical audit (performance outcomes).
6. Cite any malpractice records.
7. List your attendance in continuing surgical education in abdominal surgery
   (this is specialty specific, ACCME approved courses, Category 1, 25 Credits yearly), last three years.
8. Personal interview with members of the Education Committee of the
   American Board of Abdominal Surgery

INQUIRIES

American Board of Abdominal Surgery, 824 Main Street, 2nd Floor, Suite 1, Melrose, MA 02176-2711
E-Mail: office@abdominalsurg.org or Phone: (781) 655-6102

*Revocation of Certification
A certificate issued by the American Board of Abdominal Surgery, Inc. is subject to revocation at any time if there is falsification of any part of the
application or required documentation. Revocation of an ABAS Certification can also apply, due to the revocation of a physician’s medical license
by a state board or governing board of registration in medicine or other circumstances deemed inappropriate by ABAS.
The Journal of Abdominal Surgery, Inc.
Guidelines for Authors

All articles submitted for publication must conform to the following checklist:
1. A short abstract of the article must be submitted on a separate page consisting of 150 words or less.
2. The first and last names of all authors, their academic degrees, the institution from which the article came, and the address, telephone number, e-mail address, and fax number of the author, to whom questions may be directed or reprints requested, must be included in the title page.
3. References, tables and figures should be listed in chronological order as they appear in the text, following the general guidelines listed in the American Medical Association Manual of Style: a guide for authors and editors, 9th Edition. They should be typed, double-spaced on a separate sheet. Authors must be responsible for the accuracy of their references.
4. Articles must have clarity, organization and style. The articles must be original, unpublished and not posted on the internet, in one of the following categories of abdominal surgery: clinical and/or experimental surgery; new or innovative surgical technique; book reviews; pharmacology; brief reports and case reports.
5. Two original manuscripts and two complete copies on CD ROM, in a format compatible with “Microsoft Word” for “Windows,” must be submitted to the editor at the address provided.
6. Omit “Keywords”.
7. All authors must sign an attestation, that they participated in the work presented, read the article and approve same.
8. A “copyright form” will be provided along with a “letter of receipt” upon receipt of an article for review and publication. This form MUST be returned for the article to be considered for publication.

MANUSCRIPTS
Manuscripts must be typed, upper and lower case letters, double spaced, on 8.5 x 11 inch, white bond paper, with one inch margins. Each page must be consecutively numbered and should not exceed 12 pages. Acceptable English and readability are important factors in the acceptance of articles.

Most manuscripts must include background material, methods and materials used, results derived and conclusions reached.

REFERENCES
References must follow those guidelines referred to above in the AMA Manual of Style. Examples follow:


Names of authors must be listed.

FIGURES AND TABLES
Figures must be submitted as black and white 5 x 7 inch, glossy photographs, unmounted and in good focus, or as high-quality computer-generated likenesses. Number of the figure, author’s name and title of manuscript must be indicated on the back of each figure. Legends must be typed, double-spaced on a separate sheet, as well as on the back of each figure.

Tables must not repeat information in the text of the manuscript. They are to be numbered consecutively in Roman numerals, typed, double-spaced on a separate sheet. Avoid tabs.

CONSENT
Permission to print photographs of persons whose identities are not disguised, must be submitted with the manuscript. Informed consent of human subjects involved in experiments or research programs, must be mentioned in the methods section of the manuscript.

CONFLICTS OF INTEREST
Potential conflicts of interest due to financial support or otherwise, must be acknowledged by authors and reviewers alike.

SUBMISSION INFORMATION
All manuscripts should be submitted to:
Diane Pothier, Director of Continuing Medical Education American Society of Abdominal Surgeons, Inc.
824 Main Street, 2nd Floor, Suite 1, Melrose, MA 02176

Manuscripts will not be accepted if all the above Guidelines for Authors are not adhered to.
Assisting surgeons with larger more challenging abdominal closures

JUMBO FISH
Glassman Viscera Retainer

• Metal insert strip for an added measure of support
• 3212 JUMBO (Radiopaque) 8 7/8” x 13 3/8”
• Sterile/Disposable
• Latex Free

Buy direct from:
ADEPT MED
665 Pleasant Valley Road
Diamond Springs, CA 95619
Toll Free 1-800-222-8445
530-621-1220
530-621-1310 fax
e-mail: adeptmed@aol.com
Web Site: www.adeptmed.com

PRODUCED EXCLUSIVELY IN THE USA