



and Other Interventional Techniques

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## Intestinal obstruction from midgut volvulus after laparoscopic appendectomy

First reported case

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### Abstract

We present the case of a 30-year-old man who developed a small bowel obstruction from an acute midgut volvulus 8 days after undergoing a laparoscopic appendectomy. There was no evidence of congenital malrotation or midgut volvulus on the initial computed tomography (CT) scan or at laparoscopy. Subsequently, a midgut volvulus developed in the absence of congenital malrotation.

**Key words:** Laparoscopic appendectomy — Appendectomy — Midgut volvulus — Intestinal obstruction — Small bowel — Imaging modalities

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## Successful laparoscopic fundoplication in children with ventriculoperitoneal shunts

A report of two cases

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### Abstract

We reported successful laparoscopic fundoplication in 2 pediatric cases with VPS and discuss the safety and feasibility

of the procedure. Case 1: A 13-year-old girl with VPS underwent laparoscopic fundoplication. Case 2: a 9-year-old boy with VPS underwent laparoscopic fundoplication. In both cases, laparoscopic Nissen fundoplication was performed with a standard five-port technique with a low pressure of a pneumoperitoneum. The VPS system had no effect on port layout and intraabdominal manipulation and no adverse complications were observed in either case. The effect of a pneumoperitoneum in the VPS system remains controversial, however, the author emphasized that advanced laparoscopic surgery can be performed safely with creating a low pressure of a pneumoperitoneum.

**Key words:** Ventriculoperitoneal shunt — VP shunt — Laparoscopic surgery — Hydrocephalus — Fundoplication  
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## Dual-organ ablative surgery using a hand-assisted laparoscopic technique

A report of four cases

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### Abstract

In clinical situations where more than one procedure is required, a properly positioned hand-assist device can be used to obviate the need for two large incisions. We present four cases of hand-assisted laparoscopic nephrectomy combined with a simultaneous second organ extraction. Each of the four primary procedures, as well as one of the four second-

ary procedures, was performed using a hand-assisted laparoscopic technique. In two cases, the secondary procedure was performed with an open surgical technique through the hand-assist incision. For the remaining secondary procedure, we used a laparoscopically assisted technique.

**Key words:** Hand-assisted technique — Nephrectomy — Radical prostatectomy — Colectomy

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## Management of main bile duct injuries that occur during laparoscopic cholecystectomy

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### Abstract

The introduction of laparoscopic cholecystectomy in surgical practice resulted with an increased incidence of bile duct injuries and required new classification systems. This article presents six cases of major bile duct injuries that occurred in our first 1,000 laparoscopic cholecystectomies. Four female and two male patients (ages, 36–71 years) were detected to have major bile duct injuries. Laparoscopic dissection was difficult because of acute inflammation in four patients and fibrosis in two patients. These six cases were between laparoscopic cholecystectomies 26 and 377 performed by the operating surgeons. Three of the patients had type E2 injury according to the Strasberg classification: one detected intraoperatively and the other two postoperatively. All were treated with Roux-en-Y hepaticojejunostomy. The other three patients had type D injuries: two realized intraoperatively and one postoperatively. Two of these injuries were repaired primarily over a T-tube. The remaining patient, whose injury was realized intraoperatively, underwent nasobiliary drainage postoperatively. Only one patient had a complication associated with a trocar injury to the liver parenchyma during the first operation. A hepatic abscess and external biliary fistula developed, which were treated conservatively. At this writing, all the patients are well and without problems after 2.5 to 6 years of follow-up evaluation. Difficulties in laparoscopic dissection because of severe inflammation or fibrosis resulted in injuries to our patients. We can underscore the fact that experience may not always protect from complications, and that conversion to laparotomy might have prevented some of these injuries. Patients with a minor injury and a controlled leak can be treated by a combination of surgical and endoscopic or radiologic techniques. The treatment plan must be individualized for every patient, depending on the injury type, presentation, and condition of the patient.

**Key words:** Bile duct injury — Bile leak — Biliary complications — Laparoscopic cholecystectomy

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## Laparoscopic esophagogastrostomy: an alternative minimally invasive treatment for achalasia stage III

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### Abstract

**Background:** The surgical treatment for stage III achalasia with markedly dilated and sigmoid-shaped esophagus is a matter of controversy. Some authors recommend esophagectomy as the primary treatment because they believe that Heller myotomy cannot improve dysphagia in such cases. We present a patient with achalasia stage III in whom we successfully performed a laparoscopic esophagogastrostomy with posterior semifundoplication.

**Methods:** Using a five-trocar technique, the esophagogastric junction and the distal esophagus up to the tracheal bifurcation were dissected. An endoscopic stapler (Endo-GIA II) was inserted through a small gastrotomy at the cardia, with one branch placed in the gastric fundus and the other, under esophagoscopy control, in the esophagus. By two consecutive stapler applications, a wide side-to-side esophagogastrostomy was created. To prevent gastroesophageal reflux, a posterior semifundoplication was performed.

**Results:** The operation time was 170 min. Oral food intake was started after radiologic control on postoperative day 7. Radiologic study showed rapid passage of the barium meal and no reflux through the gastroesophageal junction.

**Conclusions:** Laparoscopic esophagogastrostomy with posterior semifundoplication represents an alternative to esophagectomy and laparoscopic Heller–Dor surgery. Because of the wide side-to-side anastomoses, there is no risk of persisting stenosis such as that reported for the Heller operation, and the procedure certainly is less invasive than esophagectomy. As compared with laparoscopic extramucosal myotomy using anterior Dor fundoplication, it presents about the same technical difficulties.

**Key words:** Esophagogastrostomy — Esophagus, achalasia — Laparoscopy

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## Robotic-assisted laparoscopic cholecystectomy The first in Asia

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### Abstract

We report a case of laparoscopic cholecystectomy that was performed using a robotic surgical system. A 70-year-old

woman underwent laparoscopic robotic cholecystectomy ZEUS, the robotic system used in our study, has three interactive robotic arms fixed to the side of the operating table. The arms are controlled by the surgeon, who sits at a remote computer console. The surgeon's movements can be scaled down, and tremor is filtered out. The robotic-assisted laparoscopic cholecystectomy was completed in 42 min. The time to set up the robot was 22 mins. All of the surgically reproducible robotic maneuvers were performed without any particular difficulty. The robotic movements were stable, accurate, and reliable, as well as easy to control with precision. Our preliminary experience indicates that robotic laparoscopic cholecystectomy is safe and can be as fast as conventional laparoscopic cholecystectomy. However, further clinical applications of robotic surgery are needed to confirm this observation.

**Key words:** Cholelithiasis — Laparoscopic cholecystectomy — Laparoscopic surgery — Medical robotics — Telemedicine — Robot telesurgery

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## Diagnosis and laparoscopic management of a fallopian tube torsion following Irving tubal sterilization: A case report

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### Abstract

Tubal torsion is a very rare but serious clinical entity. Its occurrence has been reported following Pomeroy tubal ligation and laparoscopic tubal cauterization. The following case report will be the first one describing a tubal torsion after an Irving tubal ligation in a patient who also had a history of pelvic inflammatory disease (PID). This study includes the presentation of a case of tubal torsion that is diagnosed and managed laparoscopically and the review of the literature through a computerized search of MEDLINE for relevant cases in the English literature published between January 1966 and July 1999. The patient is a 26-year-old woman with a history of PID and Irving tubal ligation. She presented with a second episode of acute right lower quadrant pain. The patient underwent a diagnostic laparoscopy and was found to have a 6 x 5 cm hemorrhagic and necrotic fallopian tube consistent with torsion of the right tube. A right salpingectomy was done laparoscopically. Combination of PID and tubal sterilization in the medical history of a patient presenting with acute or intermittent pelvic pain may suggest tubal torsion.

**Key words:** Acute abdomen — Fallopian tube torsion — Irving tubal ligation — Laparoscopic salpingectomy — Sterilization

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## Laparoscopic exploration for pancreatic injury

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### Abstract

The use of laparoscopy as either a diagnostic or therapeutic tool in the trauma patient is still under debate. In this report we describe a case of a 34-year-old female with a stab wound to the lower back who was explored laparoscopically. A pancreatic laceration was noted and drained laparoscopically. The patient recovered uneventfully and was discharged on the 8th postoperative day.

**Key words:** Penetrating trauma — Pancreas — Laparoscopic exploration — Stab wound — Minimally invasive

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## Laparoscopic enucleation of an insulinoma of the pancreas tail

A case report

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### Abstract

A 29-year-old woman with a tumor of the pancreatic tail was referred to our institute. The tumor was confirmed to be a solitary benign insulinoma that protruded from the pancreas and was distant from the main pancreatic duct. A laparoscopic enucleation was performed with Laparoscopic Coagulating Shears (LCS). The postoperative course was uneventful. The laparoscopic enucleation for benign pancreatic tumor was thought to be a feasible procedure when the appropriate instruments were used.

**Key words:** Laparoscopic surgery — Insulinoma — Nucleation — Pancreas

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## Spleen-preserving laparoscopic distal pancreatectomy with conservation of the splenic artery and vein for a large insulinoma

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### Abstract

We report a successful spleen-preserving laparoscopic distal pancreatectomy for a large insulinoma with conservation of the splenic artery and vein. The patient was a 48-year-old man with syncope due to hypoglycemia. Abdominal computed tomography (CT) and ultrasonography revealed a large 6-cm mass located in the tail of the pancreas. We adopted the laparoscopic approach to remove the tumor. After careful dissection and an accurate hemostasis between the pancreas and splenic vessels, laparoscopic distal pancreatectomy was carried out using a linear stapler. There were no perioperative complications. The patient was discharged uneventfully. He had no hypoglycemic episodes or abdominal symptoms during 8 months of follow-up. When performed by experienced laparoscopic surgeons in conjunction with intraoperative ultrasonography, spleen-preserving laparoscopic distal pancreatectomy with conservation of the splenic artery and vein is a technically feasible procedure for the treatment of benign lesions of the tail or body of the pancreas.

**Key words:** Laparoscopic surgery — Distal pancreatectomy — Islet cell tumor — Insulinoma — Splenic vessels — Intraoperative ultrasonography — Pancreas

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## Laparoscopic management of large retroperitoneal lymphoceles complicating aortic surgery

Report on two cases

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### Abstract

Retroperitoneal lymphocele is a rare but debilitating complication of aortic replacement with synthetic graft. The only effective treatment reported to date is surgical reexploration and ligation of leaking lymphatics. This report illustrates the successful management of two patients with large retroperitoneal lymphoceles formed after aortic surgery using laparoscopic techniques. The available literature is reviewed. Laparoscopic fenestration of the lymphocele and laparoscopically assisted ligation of the leaking lymphatics combined with internal drainage resulted in long-

term relief of compression symptoms, as observed, respectively, over the 5-year and 3-month follow-up periods. Percutaneous catheter drainage before laparoscopic management was unsuccessful in both cases. In addition, the unique presentation of a large retroperitoneal lymphocele with intestinal obstruction is reported, and currently available treatment options are discussed.

**Key words:** Abdominal aortic aneurysm — Aortic surgery — Complication — Laparoscopic techniques — Retroperitoneal lymphocele

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## Superficialization of hemodialysis access using a video-assisted procedure

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### Abstract

Brachiocephalic fistula is one of the main options to gain blood access for hemodialysis. Although the fistula is easy to establish, puncture becomes increasingly difficult because the cephalic vein runs deep and fibrous tissue is being continually deposited over the cephalic vein. Although superficialization—i.e., the removal of fibrous tissue along the basilic vein—has been performed with conventional surgery, the long incision along the cephalic vein induces the buildup of hard fibrous tissue so that puncture may remain difficult even after the operation. To avoid this problem, we tried superficialization of hemodialysis access using a video-assisted procedure and obtained a good result.

**Key words:** Endoscopic procedure — Blood access — Cephalic vein — Hemodialysis — Superficialization — Brachiocephalic fistula — Renal failure — Kidney

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## Colovesical fistula secondary to laparoscopic transabdominal preperitoneal polypropylene (TAPP) mesh hernioplasty

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### Abstract

A case of colovesical fistula 6 years after laparoscopic transabdominal preperitoneal polypropylene (TAPP) mesh hernioplasty is reported and discussed.

**Key words:** Laparoscopic hernia repair — Colovesical fistula

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## A novel technique for the laparoscopic resection of mesenteric cysts

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### Abstract

Mesenteric cysts are rare, invariably benign intraabdominal tumors. Optimal surgical management requires complete excision of these lesions. The advent of laparoscopic surgery has allowed resection of these cysts to be achieved without full laparotomy. However, laparoscopic resection necessitates drainage of the cyst within the abdomen to facilitate extraction of the cyst through the laparoscopic ports. This article describes a novel technique in which the cyst was partially aspirated as the initial surgical maneuver. This in turn allowed traction to be applied to the cyst wall, such that it could be drawn up into the epigastric port, to aid the further dissection and removal of the cyst from the peritoneal cavity.

**Key words:** Mesenteric cyst — Laparoscopic — Surgical technique

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## Dieulafoy's lesion of esophagus

### A case report

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### Abstract

Dieulafoy's lesion is a rare arterial malformation that can cause massive gastrointestinal hemorrhage. The lesion occurs most commonly in the proximal stomach. The esophagus is not a common location for this lesion. We present the case of a 25-year-old woman who was admitted to our emergency unit with the findings of hematemesis and melena. Early upper gastrointestinal endoscopic examination revealed a Dieulafoy's lesion, which was located in the distal esophagus. Endoscopic band ligation stopped the bleeding successfully. The patient was discharged 3 days after the band ligation without any complications. Dieulafoy's lesion may cause severe, life-threatening bleeding. Endoscopic diagnosis can be difficult because of the small size and obscure location of the lesion. An abnormally di-

lated artery that penetrates through the mucosa constitutes the etiology. Endoscopy plays an important role in the diagnosis and treatment of this pathology. Despite widespread awareness of this entity, it may present a real challenge for the endoscopist due to the small size and hidden location of the lesion. The endoscopic approach to occult gastrointestinal bleeding for the diagnosis of vascular malformations is accepted as a quick and safe diagnostic method.

**Key words:** Dieulafoy's lesion — Gastrointestinal bleeding — Esophagus

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## Laparoscopic resection of a functional paraganglioma in the organ of Zuckerkandl

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### Abstract

We describe the successful laparoscopic resection of a functional paraganglioma in the organ of Zuckerkandl. A 47-year-old man with hypertension and diabetes mellitus was found to have an abdominal mass beside the aorta. The tumor was diagnosed as a functional paraganglioma by diagnostic imaging and biochemical tests. We then performed a transperitoneal laparoscopic resection for removal. After freeing the left ureter, resecting the inferior mesenteric artery, and dividing the small blood vessels, the tumor was isolated and found to be preserved in its capsule. It was retrieved in a bag through an enlarged incision. The operation time was 450 min and blood loss was 410 ml. The postoperative course was uneventful and there has been no local recurrence or distant metastasis during the 18-month follow-up period. Laparoscopic resection of functional extraadrenal paragangliomas is technically feasible and safe if adequate pre- and intraoperative medical management and a careful, steady surgical technique are used.

**Key words:** Laparoscopic resection — Pheochromocytoma — Paraganglioma — Organ of Zuckerkandl

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## Cushing's syndrome secondary to adrenal adenoma during pregnancy

### The role of laparoscopic adrenalectomy

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**Abstract**

Cushing's syndrome during pregnancy is rare because of the suppressive effect of excessive glucocorticoid on the female reproductive system. Adrenal adenoma is the most common cause of Cushing's syndrome during pregnancy. Surgical treatment by unilateral adrenalectomy was preferred during pregnancy before the advent of laparoscopic adrenalectomy. We describe two patients with Cushing's syndrome secondary to adrenal adenoma diagnosed during the first and second trimester, respectively, and successfully managed by different approaches of laparoscopic adrenalectomy—one patient upon diagnosis and one after pregnancy.

**Key words:** Cushing adenoma — pregnancy — laparoscopic adrenalectomy outcome

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**Peritoneal cystic mesothelioma****A most unusual case treated by laparoscopy**

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**Abstract**

A 43-year-old man complained that during the previous 2 years he had experienced a number of episodes of hepatic colic. After examination, we diagnosed a symptomatic cholelithiasis with a sclerosed and atrophic gallbladder. He underwent laparoscopic surgery. During the operation, we observed multiple peritoneal tumors that appeared to be metastases of a gallbladder cancer. The histological study demonstrated a benign chronic cholecystitis accompanied by multiple peritoneal cystic mesotheliomas, an extremely rare tumor in men. The etiology of cystic mesothelioma is still unclear. It has been suggested that they are really multiple inclusion cysts that result from a proliferative reaction within the peritoneal tissue; their continued proliferation might be caused by the continued persistence of an inciting factor. However, in our patient, the proliferation appeared to be related to an extensive peritoneal tissue reaction to the chronic gallbladder inflammatory process. We did not use sclerosing therapy because we had resected the gallbladder and most of the visible lesions laparoscopically; therefore, we had most likely eliminated the potential source of the inciting factor. Because it is very difficult during laparoscopy to differentiate these benign quistic mesotheliomas from peritoneal metastases or tuberculous lesions, it is debatable whether the surgeon should continue or terminate the laparoscopic procedure in these ambivalent and potentially risky circumstances.

**Key words:** Peritoneal cystic mesothelioma — Mesotheli-

oma — Laparoscopy — Laparoscopic gallbladder surgery — Gallbladder

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**Crack cocaine-related prepyloric perforation treated laparoscopically****A case report**

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**Abstract**

Perforation, which occurs in seven to 10 patients per 100,000 population annually, complicates 5–10% of peptic ulcers. Crack cocaine has been associated with many gastrointestinal disorders, including ulcer perforation. Crack-related gastroduodenal perforations, typically prepyloric, have been on the rise in the last decade. Suggested mechanisms include ischemia, motility disorders, increased air swallowing, platelet-related thrombosis, and increased ACTH and corticosterone secretion. A 28-year-old man presented with vomiting and sudden generalized abdominal pain 3 h after smoking a “rock” (a 100-mg cube of crack). Physical examination revealed generalized guarding, and plain films showed free intraperitoneal air. Laparoscopy confirmed the diagnosis of generalized peritonitis secondary to a 5-mm perforation of the prepyloric anterior wall of the gastric antrum. Omentum-patched primary closure and thorough abdominal irrigation were undertaken. The postoperative course was uneventful. Omeprazole and anti-*H. pylori* treatment, including erythromycin and metronidazole, were maintained for 8 weeks and 1 week, respectively. Although drug addicts are not easily compliant with long-term medical treatment, in the particular case of crack addiction, the vasoconstrictive and dismotility effects of cocaine may precipitate gastric necrosis and paralysis, respectively, in the case of vagotomy. Although distal gastrectomy was the wisest choice when open ulcer surgery was adopted, the laparoscopic treatment of perforated ulcer, with either suture or sutureless techniques, has been found to be comparable to open surgery with regard to postoperative morbidity, reoperation rates, and mortality. The potential advantages of laparoscopy include the avoidance of large incisions, less attendant pulmonary morbidity, less wound infection, and possibly fewer postoperative adhesions.

**Key words:** Prepyloric perforation — Laparoscopy — Crack cocaine — Gastroduodenal perforation

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