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## PROLENE MESH ERODING COLON FOLLOWING LAPAROSCOPIC INCISIONAL HERNIA REPAIR

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**Introduction:** A 50 year old gentleman underwent laparoscopic repair of incisional hernia with prolene mesh, one and half month after he had discharge from umbilicus and it did not heal with all dressings, then he roamed around from one hospital to another hospital, finally he presented to our hospital 6 months following surgery. We did CECT abdomen and sinogram which revealed contrast entering to bowel.

**Method:** Under general anesthesia we followed the sinus tract and found that the culprit prolene mesh was eroding to the transverse colon, so the mesh along with the part of the transverse colon was resected and an end to end anastomosis was done and finally the abdomen was closed.

**Result:** The patient had an uneventful recovery and everything was healed.

**Conclusion:** Prolene mesh should not be used in laparoscopic incisional hernia repair.

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## Laparoscopic repair of a traumatic abdominal wall hernia in a morbidly obese patient

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This is a case of a 31-year-old morbidly obese man with history of obstructive sleep apnea and hypertension who presented to the emergency department with a traumatic abdominal wall hernia following a motor vehicle collision. A CT scan revealed a right upper flank hernia and multiple injuries including a cervical spine fracture. As his vital signs were stable without evidence of bowel incarceration, we did not operate in the acute setting. He remained in the hospital for one-month and then he was transferred to a rehabilitation facility. Unfortunately, eight months later he developed signs of incarceration requiring only a nasogastric tube. After this episode, an intermittent periumbilical pain after meals persisted and therefore we felt surgical repair was necessary. Fortunately, the patient was able to lower his BMI from 57.5 to 45 kg/m<sup>2</sup>. We performed a laparoscopic repair to close the 12x7 cm hernia orifice using a 25x20 cm synthetic mesh placed intraperitoneally. Ten days after the operation, the patient was discharged and remained without any symptoms and recurrence in the 2-month follow-up.

If concomitant injuries accompany a traumatic abdominal wall hernia, delayed elective repair may be appropriate in selected stable patients. Twenty years have passed since the first laparoscopic approach was used to repair this uncommon hernia, and this case illustrates that it might be useful to treat morbidly obese patients.

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## laparoscopic transabdominal preperitoneal hernioplasty in a medical college setting

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**Objectives:** To determine the feasibility and patient's outcome of laparoscopic transabdominal preperitoneal mesh hernioplasty for inguinal hernias.

**Patients and Methods:** This study was carried out from March 2011 to April 2014. A total of 130 patients underwent laparoscopic transabdominal preperitoneal mesh hernioplasty (TAPP) for uncomplicated inguinal hernia. Of this, 10 patients presenting with bilateral inguinal hernias were operated in the single sitting. A 15 cm x 12 cm polypropylene mesh was used in all cases. Operative morbidity, postoperative pain, seroma formation, evidence of superficial infection, chronic groin pain and hernia recurrence were noted. The majority of the patients were discharged within 24 hours and follow-up was done at 1 week, 1 month, and 6 months.

**Results:** 130 patients presenting with uncomplicated inguinal hernias were operated over a period of three years in the department of surgery, Govt. Medical College Srinagar. The mean age of the patients was 39.18 years (range: 18 - 70 years). The median duration of operation was 48.5 minutes (range: 18 - 120 minutes). None of the procedure was converted to open inguinal hernia repair. Postoperative pain was observed in 9.23% of the cases and was easily controlled by oral analgesics. Six patients (4.62%) developed seroma, out of which one required aspiration while others settled conservatively. Two patients (1.54%) developed wound infection and one patient (0.77%) had recurrence. None of the patients developed scrotal hematoma or neuralgia. Return to normal activity after TAPP repair was found to be

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## COMPARATION OF LICHTENSTEIN AND TAPP TECHNIQUE FOR INGUINAL HERNIAREPAIR

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**Background:** The objective of this study was to compare Lichtenstein hernia repair and laparoscopic TAPP hernia repair.

**Material & Methods:** Patients who underwent hernia repair in Awal Bros Hospital, Batam, Indonesia, between January 2012 and December 2014, over 18 year old with primary unilateral, uncomplicated inguinal hernias were included in this study. We analyzed duration of surgery, length of stay in hospital, acute post operative pain, seroma/hematoma, surgical site infection, time to return to normal activity, recurrence and chronic post surgical discomfort in hernia site.

**Results:** 54 patient with inguinal hernia were included to this study, 25 TAPP's patients and 29 Lichtenstein's patients. The mean age was similar in both groups. The mean operative time in Lichtenstein group was faster than in TAPP group. The length of hospital stay and was similar in both groups. Acute post operative pain was similar. TAPP patients was faster to return to normal activity (8 vs 15,21 days;  $p < 0,05$ ). No evidence of surgical site infection or recurrence in both groups. Hematom/seroma was occurred in 10,1% of Lichtenstein group and 4% in TAPP group ( $p > 0,05$ ). Lichtenstein group was felt more discomfort in hernia site (20,65 vs 8%: ( $p < 0,05$ ).

**Conclusion:** There is no difference in surgical site infection, length of hospital stay, post operative hematoma/seroma and recurrence in the both group. TAPP group was faster to return to normal activity less discomfort in hernia site, but had longer operative time.

**Keywords:** herniarepair, Lichtentein's, TAPP

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## Clinical analysis of 18 cases of inguinal incarcerated hernia treated by transabdominal preperitoneal laparoscopic inguinal herniorrhaphy

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**Objective:** To investigate the feasibility, indications, advantages, mesh selection and postoperative effects of transabdominal preperitoneal laparoscopic inguinal herniorrhaphy (TAPP) on the treatment of inguinal incarcerated hernia.

**Methods:** The clinical data of 18 cases of patients with inguinal incarcerated hernia treated by TAPP from January 2015 to March 2016 were studied. The operative time, hospital stay, complications, recurrence and other factors were analyzed.

**Results:** The operations of all the patients were successful without conducting small intestine resection and converting to laparotomy, and all the patients were cured while left the hospital. The shortest operation time was 80 min and the longest was 190 min with a mean operation time of 130 min. The postoperative hospital stay was 6-12 days. The incarcerated hernia contents were small intestines in 11 cases, omentum in 6 cases, small intestine combined with omentum in 1 case. Postoperative seroma in inguinal region was appeared in 1 case and scrotal seroma in 3 case, and no chronic pain, scrotal hematoma, bowel obstruction, wound infection, patch infection and other complications were found.

**Conclusion:** TAPP is feasible and safe in curing the inguinal incarcerated hernia. Compared with open surgery, TAPP can easily find the automatically returned hernia contents after anesthesia, and avoid the necrotic bowel within the abdominal cavity with the missing retrograde incarcerated hernia. The mesh of TAPP is conducted in the preperitoneal space and it can avoid the heavy edema bleeding sites, and reduce the chance of infection patch.

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## Intestinal Obstruction after Reduction "En-masse of inguinal hernia"

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"Reduction en-masse of inguinal hernia", means reduction/migration of a hernial sac along with the incarcerated bowel into the preperitoneal space and is most often arising from the manual reduction of the hernia. Occasionally, it can also be spontaneous. There is usually a history of difficult reductions, and which would induced continued incarceration, and so containing incarcerated bowel loop in the preperitoneal space resulted in signs of bowel obstruction persist. Emergent surgical intervention must be performed to prevent potential complications, such as ischemic bowel disease.

We present a case of 62 y/o male, who was sent to emergency room because of incarcerated left inguinal hernia. Manual reduction of incarcerated hernia was performed successfully under intravenous general anesthesia in the operating room. Further hernioplasty is held because of congestive heart failure (LVEF= 34%) and bleeding tendency due to aspirin. He was admitted to ordinary ward and waiting for surgery. However, signs of intestinal obstruction persisted with increased nasogastric tube amount. Emergent diagnostic laparoscopy was arranged, which disclosed small bowel trapped in a sac with gangrenous change. The hernial sac located in the preperitoneal space with fibrosis of the opening. We converted to exploratory laparotomy via a low midline incision. Segmental resection of small bowel and repair of the peritoneal defect by sutures were carried out. Sepsis developed after surgery, and the patient expired for multiple organ failure. This case should help raise clinical awareness of the possibility of intestinal obstruction after reduction "en-masse of inguinal hernia"

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## Clinical analysis and laparoscopic treatment of recurrence after open inguinal hernia repair

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**Objective:** To investigate the recurrence of open inguinal hernia repair and the laparoscopic treatment for the recurrence.

**Methods:** Clinical data of 58 cases of recurrent inguinal hernia were reviewed retrospectively from Oct. 2010 to Apr. 2015. The median interval from the initial surgery to recurrence was 5 years (range from 1 week to 50 years). 53 cases after single hernia repair include 26 after tension repair, 9 after Lichtenstein repair, 9 after mesh-plug hemioplasty, 2 after Kugel procedure and 7 after Gilbert repair (UHS). 1 case received three surgeries which include 2 tension repairs and 1 mesh-plug hemioplasty. 4 cases received two procedures which include tension repairs and tension-free repairs.

**Results:** In principle, Recurrent hernias after open procedure were treated with laparoscopic repairs. 26 recurrent hernias after single tension repair include 12 direct hernias, 11 indirect hernias, 2 femoral hernias and 1 pantaloom hernia. 9 recurrent hernias after Lichtenstein repair include 1 direct hernia, 6 indirect hernia and 2 femoral hernia. 9 recurrent hernias after mesh-plug hemioplasty include 5 direct hernias and 4 indirect hernias. 1 direct and 1 indirect hernia were confirmed for the recurrence after Kugel procedure. All the recurrence after Gilbert repairs were indirect hernias. The initial mesh patches were not removed except 2 cases of plug which impeded repairs.

**Conclusions:** There were different characteristics of recurrence in each type of hernia repair. Laparoscopic treatment for recurrence of open inguinal hernia repair is safe and effective.

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## Laparoscopic transabdominal preperitoneal approach (TAPP) for the repair of particularly complex recurrent inguinal hernias

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**Background:** The treatment of recurrent inguinal hernia is a common problem that vexes all the general surgeons. It is always accompanied with higher recurrences and more postoperative complications. Which is the best treatment still remain controversial. Transabdominal preperitoneal approach (TAPP) seems to be a preferred alternative. We report our experience with the TAPP surgery for the repair of some particularly complex recurrent inguinal hernias.

**Methods:** Between November 2012 and February 2016. Nine cases of complex recurrent inguinal hernia who have underwent previous TAPP, TEP repair or IPOM repair were enrolled in this study. All of them were treated by laparoscopic transabdominal preperitoneal repair again. The clinical data were retrospectively analyzed.

**Results:** All surgeries were successful without any serious complications. The mean operative time was 90(range 50-145) min while mean blood lost was (30±13) ml. The mean of postoperative hospital stay was 76 (range 36-144) h. Complications including urinary retentions, scrotal seromas were noticed in 3 cases (33.3 %) and were properly managed, with no major impact on outcome of the operations. Complications associated with mesh was not detected. No serious acute or chronic pain occurred postoperatively. No recurrent case was found in these patients who had been followed-up for 3-42 months.

**Conclusions:** The TAPP procedure for repair of complicated inguinal hernia is a safe procedure with satisfactory outcome. Tailored treatment should be employed during the operation and the technique should be reserved for surgeons with extensive experience in the TAPP.