AS11-7

Laparoscopic Ventral hernia mesh repair Hybrid technique: Our experience

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Abstract Content: Ventral hernias continue to be one of the common cases seen by general surgeons in their out patients. Management of these hernias has evolved over time with no one 'gold standard' procedure that can address all concerns, till date. Hybrid technique is one technique which is slowly gaining acceptance.
Objective: A Retrospective comparative study, to see if hybrid technique is an acceptable alternative to a complete laparoscopic ventral hernia mesh repair in our setup.
Method: 20 cases of primary laparoscopic ventral hernia were compared with 20 cases of ventral hernia operated by hybrid technique. All patients were followed up for one-year post operatively & were compared in terms ofpost-operative pain (visual analogue scale), duration of analgesic requirement & hospitalization, resumption of regular activities and early recurrence.
Conclusion: Hybrid technique matches with total laparoscopic ventral hernia repair on all parameters and appears to be an acceptable alternative in our set-up though long term studies are required before completely replacing it.

AS12-1

The role of laparoscopic repair in incarcerated and strangulated groin hernias

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Laparoscopic surgical management for emergency surgical condition has become more popular in recent decades. This is due to the better understanding of laparoscopic abdominal anatomy, better laparoscopic surgical skill training, the much improved laparoscopic instruments, and better anaesthesiology.
Patient with emergency surgical conditions present as a spectrum. This also applies to incarcerated or strangulated hernia patients. Emergency laparoscopic hernia surgery has been performed in many specialized centered. A retrospective comparative analysis has been performed to evaluate open versus laparoscopic management for acute incarcerated or strangulated groin hernias. Result showed lower wound infection rates, lower laparotomy rate, and shorter mean hospital stay for laparoscopic group.
Emergency laparoscopic hernia repair for strangulated groin hernia is feasible in specialized center. Initial analysis showed improved patient outcome over open repair group. A proper designed randomized controlled study should be carried out in specialized center.

AS12-2

The use of prosthetic mesh in the emergency management of the acute incarcerated inguinal hernias: a retrospective study of 167 patients

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Introduction: Tension-free hernia repair has been regarded as a gold standard treatment for selected inguinal hernias, but the use of prosthetic mesh in incarcerated inguinal hernias is controversial. We performed our study to evaluate the safety of prosthetic mesh repair for emergency cases.
Methods: Patients with acute incarcerated inguinal hernias who underwent emergency prosthetic mesh repair during 2010 to 2015 at our department were included. Patient characters, operative approaches, results and complications were retrospectively analyzed.
Results: A total of 167 patients were included in our study. 122 patients underwent open surgery while the remained 45 patients underwent laparoscopic TAPP. There were 153 males and 14 females, the median age was 54 ± 17 years. The hernia was indirect in 133 patients (79.6%), direct in 15 patients (9.0%) and femoral in 19 patients (11.4%). Non-viable intestinal resection was performed in 14 patients (8.4%), only 2 of which underwent wound infection. Another 3 patients who developed wound infection had viable hernia content. There was no mesh-related infection. Other complications included scrotal seroma/hemotoma in 25 patients (15.0%), pulmonary infection in 10 patients (6.0%), and deep vein thrombosis in 2 patients (1.2%). There were 2 perioperative mortalities. During the median follow-up of 34 ± 19 months (range from 6-77months), 2 recurrences were recorded in our study.
Conclusion: The use of prosthetic mesh in the treatment of acute incarcerated inguinal hernia is safe. Non-viable intestinal resection cannot be regarded as a contradiction of the mesh repair.

AS12-3

The effect analysis of incarcerated/strangulate treatment with preperitoneal tension-free herniorrhaphy

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Objective: To analyze the effect of preperitoneal tension-free herniorrhaphy for the incarcerated and(or) strangulated hernia.
Methods: During Mar. 2012 to Mar. 2015, 63 incarcerated and(or) strangulated hernia patients (incarcerated hernia group) and 1,036 primary inguinal hernia patients (primary inguinal hernia group) accepted preperitoneal tension-free herniorrhaphy in our department, A retrospective analysis was conducted to compare and evaluate the clinical data between the two groups.
Results: The operation time (42±8min),length of stay (4.0±2.6d) and time return to work (9.0±3.3d) in incarcerated hernia group were higher than primary inguinal hernia group (38±4min) (3.0±0.6d) (8.1±2.5d) and had statistically significant difference ($p<0.01$). The blood loss (9.5±13.9mL) in the operation in incarcerated hernia group were little higher than primary inguinal hernia group (7.2±3.5mL) but no significant difference ($p=0.148$). there were 2 infection case and 7 sceotal seroma cases (11.1%) in incarcerated hernia group and 1 infection case and 93 scrotal seroma cases (9.0%) in primary inguinal hernia group, all patients recovered after treatment, there were 1 recurrence in incarcerated hernia group and 4 cases in primary inguinal hernia group. No chronic pain and secondary operation in both groups.
Conclusion: The preperitoneal tension-free herniorrhaphy is an alternative approach for the treatment of incarcerated and (or) strangulated hernia.

AS12-4

Results of mesh repair in the emergency management of the incarcerated abdominal hernias

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Objective: to study the curative effect of mesh repair in the incarcerated abdominal hernias.
Methods: The clinical data of 30 patients with abdominal incarcerated hernia from January 2011 to January 2016 who received mash repair were reviewed in this study, and 30 patients receiving conventional neoplasty were also reviewed. All patients' general condition, hernia type, duration of acute incarceration, postoperative complication, follow-up were compared.
Results: The incidence rate of complications encountered by mesh repair group was as same as the controlled group (16.7%vs20%, $p<0.05$). The recurrence rate in the tension-free herniorrhaphy (0%) was lower than the conventional neoplasty group (6.7%).
Conclusion: The use of mesh repair in the emergency management of the acutely incarcerated abdominal hernias is safe.

AS12-5

Surgical Treatment of 65 Incarcerated Inguinal Hernias Cases in Single Center

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Objective: To evaluate the clinical factors and features of incarcerated inguinal hernias and individualized treatment.
Methods: The clinical data of 65 cases of incarcerated inguinal hernias from Jan. 2013 to Dec. 2014 in Department of General Surgery, Hernia and abdominal wall surgery center, Huadong Hosptial affiliated to Fudan University were analyzed retrospectively.
Results: Among 65 cases, 29 cases performed emergency operations while other 36 cases are selective. We found strangulation of intestine in 7 cases. 6 cases had complicatios with 3 pulmonary infection, 1 incision infection, 1 heart failure, 1 paralysis intestinal obstruction and 1 obturator hernia case of recurrent. An 87 years-old patient died of severe pulmonary infection and heart failure postoperatively.
Conclusion: The prevention of incarcerate inguinal hernia is much more important than the treatment and individualized treatment should be used for different cases. Tension-free hernioplasty is safe and effective for incarcerated inguinal hernia. For female patients, the emergency operation is necessary because of the high incidence of femoral hernia and obturator hernia.

AS12-6

The application of laparoscopy assisted partial enterectomy in the herniorrhaphy of strangulated hernia

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Objection: To explore the technical feasibility and safety, and clinical efficacy of laparoscopy assisted partial enterectomy (LAPE) in the tension-free herniorrhaphy of strangulated hernia.
Method: All the patients who received partial enterectomy and herniorrhaphy because of srangulated hernia from January 2010 to December 2014 were separated to 2 groups randomly. One was the experimental group in which the 28 patients were performed LAPE and tension-free herniorrhaphy with a mesh, and the other was the control group in which the 39 patients were performed enterectomy and Bassini herniorrhaphy openly.
Result: The hernia recurrence and chronic pain or discomfort in the experimental group are lower than which in the control group significantly. There is no significantly difference in the average operation time, post-operative mortality rates and incisional infection between the two groups.
Conclusion: The patients in experimental group have less complication of hernia recurrence and chronic pain or discomfort and the technique of LAPE plus tension-free herniorrhaphy with a mesh is safe and effective.

AS12-7

Open combined with TAPP hybrid surgery in the treatment of inguinal incarcerated hernia: a retrospective analysis of 35 cases

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Objective: To investigate the clinical value of open combined with TAPP hybrid surgery in the treatment of incarcerated inguinal hernia, and to summarize surgical experience.
Methods: A retrospective analysis was conducted on the surgical data and following treatment of 36 patients with incarcerated inguinal hernia undergoing open combined with TAPP hybrid surgery between January 2015 and July 2016.
Results: All 36 patients received TAPP surgery combined with open surgery, with 35 patients cured. Among them, 13 patients had incarcerated hernia combined with blood circulation disorder, 21 had no blood circulation disorder, and 1 had intestinal perforation and died later, with the cause of death irrelevant to surgery.
Conclusion: For patients with incarcerated inguinal hernia but no contraindications to laparoscopic application, TAPP surgery should be selected positively for detection; for patients with difficulty in releasing incarcerated substance, TAPP surgery should be combined with open surgery to achieve satisfactory efficacy.

AS12-8

Disasters in laparoscopic hernia surgery and their management

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Laparoscopic surgery is now being increasingly being done for inguinal hernias due to its advantages of decreased pain and early return to daily activities. Inguinal hernias can be repaired either trans-abdominal pre-peritoneal (TAPP) or totally extra peritoneal (TEP). Laparoscopic repairs pose its unique set of complications many of which are not seen in traditional open hernia repair. We present a series of cases of complications like bleeding, trocar injury, intestinal obstruction and recurrences and their management.

AS12-9

The effect of the laparoscopic totally extraperitoneal inguinal hernia repair (TEP) on male serum testosterone concentration and testicular blood supply

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Objective: To investigate the male serum testosterone concentration and testicular blood supply of the patients with unilateral inguinal hernia after laparoscopic totally external inguinal hernia repair (TEP).
Methods: There were 34 male patients who received TEP from April 2013 to April 2014, the follow indexes were compared at 1 day before operation, 4th week and 24th week after operation: 1.WBC; 2.serum testosterone; 3.testicular temperature; 4.testicular volume (TV); 5.diameter of testicular artery, systolic peak of blood flow velocity (PSV), end-diastolic blood flow velocity (EDV) and resistance index (RI) in testicular artery; 6. diameter of spermatic vein, blood flow velocity in the spermatic vein and other indicators.
Results: The WBC of 4th week after operation was higher than the WBC of before operation [$(6.27\pm0.22)\times10^9$/L vs $(5.33\pm0.20)\times10^9$/L; p=0.008],; While the WBC of 24th week after operation was similar to the WBC of before operation [$(5.48 \pm 0.23) \times 10^9$/L vs $(5.33 \pm 0.20) \times 10^9$/L; p= 0.900). The serum testosterone concentration, testicular size and temperature of the affected side and the unaffected side, index of the testicular artery and vein observation had no statistically significant differences at 1 day before operation, 4th week and 24th week after operation compared each other (P > 0.05).
Conclusion: The TEP operation has no significant effect on male serum testosterone concentration and testicular blood supply.

AS12-10

The Cause and Treatment of Complications for Scrotum Seroma of Inguinal Hernia in Patient

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Seroma formation following open or laparoscopic mesh repair of inguinal hernia is common, albeit with no impact on recovery. Chronic postsurgical seroma is a major clinical problem, which can significantly influence the patient's quality of life.
Objective: To explore the cause of seroma, prevention and treatment of postoperative complications of inguinal hernia. Methods: We analyzed 74 cases with postoperative complications of inguinal hernia in this paper. There were scrotum seroma in 22 cases.
Result: The rate of seroma after inguinal hernia mesh repair can reach 30%. The reasons for posthernioplasty seroma are often unclear. It has been linked to nerve injury and nerve entrapment, but there is also association between the rate of seroma and the type of mesh used for hernia repair. As there are >160 meshes available in the market, it is difficult to choose a mesh whose usage would result in the best outcome. Different mesh characteristics have been studied, among them weight of mesh has probably gained the most attention. The choice of adequate therapy for scrotum seroma after inguinal hernia repair is controversial. The European Hernia Society recommends that a multidisciplinary approach at a pain clinic should be considered for the treatment of scrotum seroma. Resection of entrapped nerves, mesh removal in the case of mesh related seroma or removal of fixation sutures can be beneficial after inguinal hernia surgery.
Conclusion: The main cause resulting in complications was in correct operation. Improving operative skill, timely and correct treatment of complications are the key for prevention and treatment of complications.

AS13-1

Advanced TEP-Beyond the Learning Curve

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Endoscopic hernia repair is an established surgical procedure. TEP is an advanced minimally invasive surgery, with a steep learning curve. Certain situations may present a challenge even to an experienced surgeon.
A "difficult patient" may be one who is morbidly obese which makes entering the extra-peritoneal space challenging as well as dissection. In a patient who is very muscular the potential space may not open up freely. The body habitus may create difficulties when there is a short lower abdominal segment between the umbilicus and pubic symphysis. A previous surgical scar may also make dissect in difficult.
A "difficult hernia" includes large complete indirect inguinal hernias as well as irreducible, obstructed and sliding hernias. A recurrent hernia especially after previous TEP / TAPP may have excessive fibrosis and distorted anatomy. A previous lower abdominal scar may also pose certain difficulties.
In all these situations TEP becomes even more challenging, but with patience sand persistence, it is usually possible to complete surgery.