AS22-1

The Feasibility of Single Incision Laparoscopic TAPP with Common Laparoscopic Instruments

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Background: In recent years, single incision laparoscopic (SIL) hernia repair have been reported in some clinical centers by using the triports and the curved laparoscopic instruments. However, this technology is very expensive for some people. How can we benefit more people to meet their needs for reduce the port-related morbidities and improve cosmetic outcomes? This study aimed to assess the safety, efficacy and cost effectiveness between SIL TAPP approaches with common laparoscopic instruments and conventional laparoscopic (CL) TAPP.
Methods: We analyzed the results of patients who underwent either CL or SIL TAPP with common laparoscopic instruments for inguinal hernia between May 2014 and May 2016 in Affiliated Hospital of Nantong University. Patients' demographic details, type of hernia, operative time, mesh used, post-operative complications and costs were compared.
Results: There were 50 patients in SIL compared to 51 in CL group. SIL vs. CL showed: age45±2.31 vs. 54±2.72, p<0.05; post-operative painday one 2.0 vs. 3.0, p<0.05; operative timesunilateral 50.0 vs. 39.0 min, p<0.05 and bilateral 80.0 vs.60.0 min, p<0.05; cosmetic scar scores 12.0 vs. 24.0, p<0.01; Costs of ports/trocars for SIL and CL were RMB 400 and RMB 400.
Conclusion: Our results have shown that in experienced hands, SIL TAPP with common laparoscopic instruments is safe and as feasible as CL. In addition, this technology improves the cosmetic outcomes significantly, but it is much cheaper than the use of triports, is likely to be widely used.

AS22-2

Laparoscopic intraperitoneal onlay mesh (IPOM) technique with laparoscopic percutaneous extraperitoneal closure (LPEC) for inguinal hernia in adult

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Introduction: We herein report simple and fast laparoscopic procedure to repair an inguinal hernia in adult using an IPOM technique in conjunction with LPEC.
Surgical procedure: Under general anesthesia, this procedure is performed by single-incision laparoscopic surgery. First, make sure the hernia orifice, then, LPEC was performed. Then the self-expandable ePTFE mesh (VENTRIO/VENTRIO ST) was placed directly onto peritoneum with AbsorbaTackTM overlapping the place where LPEC was done widely.
[Materials and Methods] From February 2013 to July 2016, we performed this procedure in 129 inguinal hernias (119 patients; 96 males and 27 females). Ten patients had a bilateral hernia. Bladder and large hernia are excluded preoperatively.
Results: There were 99 indirect, 25 direct and three femoral hernias. The average age of patients was 72.5-year-old. Mean operative time was 46.2 minutes (from 18 to 89 minutes). There was no conversion and intraoperative complications. There was a 7.0% of postoperative complications; 3 seromas, 2 chronic pains, 2 adhesive intestinal obstructions and 2 omental migration beneath the mesh. At an average 21 months follow-up, we recognized only 1.5%(2/129) recurrences.
Conclusions: The most important advantage of this IPOM with LPEC procedure for inguinal hernia in adult is that it is performed easily within relatively short time. Also, the recurrence rate is low. It is easier and faster than the other laparoscopic procedures (transabdominal preperitoneal (TAPP) repair and total extraperitoneal (TEP) repair). We have to evaluate the long-term follow-up, this procedure is, however, attractive for inguinal hernias.

AS22-3

A novel less invasive method of transabdominal preperitoneal repair (TAPP) for groin hernia with single incision plus one puncture

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Introduction: In trans-abdominal pre-peritoneal repair (TAPP) for groin hernia, single-port laparoscopic surgery (SILS) has been reported to reduce abdominal damages. We have tried a new operation method, two ports from single incision plus one puncture (POP-SILS) in TAPP.
Patients and Methods: A total 118 patients of TAPP from May 2014 to May 2016 at our hospital were investigated. Nineteen-one cases had groin hernia of either side, and twenty-seven cases had both sides. In the POP-SILS TAPP, we use two 5mm ports through a multi-channel port in umbilicus and a needle instrument pierced above the pubic bone. By using flexible 5 mm diameter camera, we can keep triangular formation easily. We study the safety and usefulness of this method from the point of operation time, postoperative stay, and complications.
Results: The median operation time of either side hernia cases was 77 min (38-152), and that of bilateral cases was 139 min (91-269). Three cases needed one or two additional 5mm ports, and one case with severe preperitoneal adhesion due to previous operation for prostate cancer converted to open laparotomy because of venous bleeding. Other complications were a spermatic cord injury case and a postoperative seroma case needing percutaneous puncture. There were no incisional hernia nor wound infection.
Conclusion: The operation scar is less visible than conventional TAPP or SILS-TAPP, and there is no difference between our POP-SILS-TAPP and CLA in operation time and complication rate. The POP-SILS-TAPP is demonstrated as a novel minimally invasive approach of laparoscopic groin hernia repair.

AS22-4

Transumbilical single-incision laparoscopic transabdominal preperitoneal hernioplasty with homemade port: 20 cases report

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Objective: To evaluate the safety and feasibility of transumbilical single-incision laparoscopic transabdominal pre-peritoneal hernioplasty (TUSI-TAPP) with a homemade port for inguinal hernia.
Methods: We treated 20 cases (12 unilateral and 8 bilateral inguinal hernia cases) of TUSI-TAPP with conventional laparoscopic instruments and homemade ports which composed of a wound retractor, surgical gloves and 3 ordinary trocars. Clinical data and follow-up results were collected and analyzed retrospectively.
Results: All 20 patients received TUSI-TAPP uneventfully. The median operating time for 12 unilateral cases was 90.0 (55-175) min, the median blood loss was 5.0 (2-10) ml and the median postoperative hospital stay time was 2.0 (1-3) d. The median operating time for 8 bilateral cases was 105.0 (100-145) min, the median blood loss was 7.5 (5-10) ml and the median postoperative hospital stay time was 3.0 (2-4) d. All the 20 patients had minor postoperative pain which measured on a visual analogue scale and no post-operative complications were noted. Additionally, umbilical incisions proved cosmetically favorable as scars were not readily visible. Patient wounds healed without issue and at 12-month follow-up no hernia recurrences or complications were noted.
Conclusions: Our initial impression concerning TUSI-TAPP with a homemade port is a safe and efficient procedure with a favorable cosmetic aftermath. This method can simplify the TUSI-TAPP with available equipment and easy applied in basic hospitals.

AS22-5

A shift to single-port TEP from 3-ports TAPP

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Introduction: After experiencing about 100 cases of 3-ports transabdominal preperitoneal (TAPP) technique, I began to perform single-port totally extraperitoneal (sTEP) technique. Initially, I had a hard time with unique development of the view and operation of the forceps in sTEP, but after 15 cases, I mastered the style. I report my experience of shifting from TAPP to sTEP.
Patients: Included are 15 cases of TEP that we performed from August 2015 to June 2016. All patients were men.
Method: I made a 2cm incision at the umbilicus, inserted an FF mini-type Lap Protector, installed an EZ Access, and inserted three 5mm EZ trocars. The forceps were operated with cross technique rather than parallel technique, mainly using straight forceps.
Results: Median operation time was 57.5 minutes. Two cases were shifted to TAPP because of peritoneal damage and postoperative adhesions. The average length of postoperative hospital stay was 2.0 days. Seroma developed in 4 patients and postoperative hematoma in one patient, but all complications were resolved with medical treatment. There were no other serious complications or recurrences of hernia. I did not experience a learning curve in terms of operation time, but as I gained experience, I became used to the cross technique and felt less stress over parietalization or mesh placement.
Conclusion: If one has TAPP experience, sTEP can be mastered within a few cases. I think that learning the cross technique is important when overcoming the movement restrictions of sTEP.

AS22-6

Clinical Characteristics of Spermatic Cord Lipomas

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Lipoma of the spermatic cord is incidentally found during inguinal hernia repair. When correcting inguinal hernia, laparoscopic surgeons are concerned about spermatic cord lipoma, which can cause postoperative inguinal bulging. This clinical review describes prevalence, proper management, and importance of spermatic cord lipoma. Inguinal hernia repair cases between December 2009 and July 2015 were reviewed via electronic medical record system. Repairs were undertaken via open technique. Sex, weight, height, BMI, type of hernia and location of hernia were compared to identify clinical characteristics of spermatic cord lipomas.

AS22-7

LAPAROSCOPIC REPAIR IN FATTY INGUINAL HERNIA

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Background and Objective: Inguinal hernia is abnormal protrusion of intra-abdominal tissue through abdominal defect in the groin, with sac containing bowel or omentum. Hereby we reporting an inguinal hernia with sac loaded with extra peritoneal fat creating abdominal defect in the groin.
Method: Standard laparoscopic examination of the inguinal hernia revealed defect either medical or lateral of inferior epigastric vein in 3 patients no defect is noticed however, pre-operative diagnosis is confirmed. Dissection of the peritoneum revealed the SAC and defect. Optilene mesh is 15x15cm polypropylene to cover the defect.
Results: During 3 years of Laparoscopic op 3 patients has that type of hernia, one indirect and 2 direct inguinal hernia.
Conclusion: In the presence of clinical diagnosis and absence of Laparoscopic of defect finding, dissecting the peritoneum is needed to avoid second operation. Fatty inguinal hernia is new laparoscopic finding will encounter surgeon in the future and should be in mind during laparoscopic management of symptomatic hernia.

AS22-8

Sacless groin hernia. Should it be treated as a true hernia? About 7 cases and review of literature

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Introduction: The dogma of considering that a groin hernia is present only when a peritoneal sac is identifiable is now abandoned since many cases of hernias with intact peritonea was reported especially after the generalization of laparoscopic approach. The etymology used to describe these findings varies from sacless hernia, to sliding fatty hernia or lipoma of the cord and round ligament. It is a surprising situation for the surgeon and the management is still controversial, for certain authors the resection of the lipomas with mesh repair must be the rule, others prefer the conservative management for anatomical and medico-legal reasons.
Case reports: The authors report about 7 cases (6 men and 1 women, with an average age of 41) operated with the diagnosis of groin hernia (4 right side, 2 left side and 1 bilateral). 2 patients by open technique and 5 patients by laparoscopic approach (one of them robotic -assisted).Preoperatively 3 patients had only clinical assessment, 4 patients were investigated by ultrasound and 2 patients had groin MRI. During the surgery no peritoneal sac was found .A conservative management was decided in 2 cases, 4 patients had a mesh repair, and one had excision of lipoma without mesh placement. Through the result of this short case series and a review of literature the authors will discuss the optimal management of these kinds of hernias, the best preoperative investigations and the surgical options according to the particularities of each case.

AS23-1

Anterior hernia repair is better than laparoscopic hernia repair

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Introduction: Tension free hernia repair using polypropylene mesh was introduced by Lichtenstein in 1970's. In our institution, mesh plug technique was introduced in 1995 and the results are feasible as previously described. In 2010 anterior preperitoneal technique using PolySoft was introduced to direct hernias. In 2012, laparoscopic hernia repair (TAPP) was introduced to bilateral patients and young adults. From our experiences of more than 4000 cases of groin hernia repair, we insist that anterior hernia repair is much better than laparoscopic repair, except some selected cases.
Methods and Results: Laparoscopic repair (TAPP) is only indicated to the patients of bilateral groin hernia and the young adults of younger than 70 y. o. who need quick recovery to physical labor. To the indirect cases of less than 2cm-hernia defect, mesh plug technique using Light Perfix Plug is performed. To direct and large indirect cases, anterior prepertoneal technique using PolySoft is performed. The results are both acceptable.
Cost: In Japanese medical system, the medical fee of laparoscopic repair is 4 times as much as anterior repair. I do not deny the advantages of laparoscopic hernia repair, I insisit that surgeons should select the appropriate patients to more expensive technique, because from the standpoint of economics, 4-fold cost should bring 4-fold benefits.
Conclusion: Considering all factors in hernia surgery, anterior hernia repair is better than laparoscopic hernia repair. Surgeons try to find the most appropriate cases for laparoscopic repair.