AS31-3

IMPROVING PATIENT OUTCOMES WITH INGUINAL HERNIOPLASTY LOCAL ANAESTHESIA VERSUS LOCAL ANAESTHESIA AND CONSCIOUS SEDATION. Preliminary Results of A Randomized Controlled Trial

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Background: Conscious sedation is increasingly being used in ambulatory surgery, with the aim of improving patient outcomes, including patient satisfaction. Reports demonstrate that the use of conscious sedation in inguinal hernioplasty performed under local anaesthesia is safe and effective in improving patient satisfaction. No previous randomized trial has assessed the benefit of conscious sedation in this regard.
Methods: This represents preliminary analysis of a randomized controlled trial comparing local anaesthesia alone (LA) and local anaesthesia with conscious sedation (LACS) in patients undergoing inguinal hernioplasty. Outcomes measures of interest included demographics, operative time, complications, time to discharge, pain scores and overall patient satisfaction with the procedure. T-test and Chi-Square tests were used for analysis. P value of < 0.05 was considered significant.
Results: A total of 144 patients were included and subjected to analysis. Seventy-four patients were assigned to the LA group and 70 patients to the LACS group. Significantly more patients in the LA group experienced pain during the procedure compared to the LACS group (p=0.022). Procedural pain severity was also greater in the LA group (p=0.0098). There was no difference between groups with respect to time to discharge (p=0.5). Overall patient satisfaction at discharge and at two weeks postoperatively was better in the LACS group (P=0.009; 0.001).
Conclusion: The use of conscious sedation for local inguinal hernioplasty is safe, results in less pain experience and severity and is associated with better patient satisfaction. The use of conscious sedation does not delay patient discharge.

AS32-1

What are the differences between female and male groin hernias ?

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Groin hernias are more common in males. In addition,the presentation, Gilbert types, surgical repair, convalescence and recurrences may be different. Among 3344 adult groin hernia patients repaired from 2001 to 2014 (prospective database), 397(12%) were female. The age distribution, involved groin, anesthesia, Gilbert types, endometriosis, repair procedure, length of stay, postoperative pain and recurrence of the 397 females were compared with those of the whole group. Result: Average age: female / whole group were 46.4+-16.1/55.7+-18.4. Involved groin: right (47%/46.1%), left (30%/28.6%), bilateral ((7.8%10.7%), femoral (8.6%/3.8%), recurrent (6%/12.6%). Anesthesia: local (15.6%/21%), epidural (74.6%/70%), general (9.8%/9%). Gilbert types: 2 (60.5%/ 44.7%), 3 (22%/25.8%), 4, 5, 6 (7%/25.6%), 7 (11%/3.5%). Endometriosis: 1.5%/0.2%. Repair procedure: anterior repair (80%/32%), posterior (2.5%/23%), bilayer(17.5%/45%). Length of stay: 0 day (7.3%/7.8%), one (69.2%/68.5%), 2 (16.2/20%), 3 (5.3%/2.2%), >4 (2%/1.4%). Postoperative pain (VAS 0~5) at day 1, 6 and 90: no difference statistically. Long-term recurrence: 0.5% / 0.3%. Conclusion: Female groin hernias are different from males. the average age is younger, the involved groin has more femoral hernia(8.6%/ 3.8%) and less recurrent hernia (6%/12.6%),female has more femoral defect (11%/ 3.5%), less direct defect (7%/25.6%), 1.5% of the female patients have endometriosis in the sac, higher percentage of female received anterior repair (80%/32%), there is no differences on the length of stay, postoperative pain and recurrences.

AS32-2

Clinical Characteristics of Laparoscopic Repair for Groin Hernias in Female Patients: A Report of 225 Cases

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Objective: To investigate the clinical characteristics of laparoscopic repair for groin hernias in female patients.
Methods: The clinical data of 246 groin hernias in 225 female patients were analyzed retrospectively. Between January 2001 and December 2013, these female patients undertook laparoscopic hernia repair procedures, including 170 TAPPs for 183 hernias and 55 TEPs for the remaining 63 ones. According to the maintenance of round ligaments, the data were classified into preservation group (104 hernias in 95 patients) and transection group (142 hernias in 131 patients).
Results: We have 36 patients with 41 femoral hernias (16%). 12 cases are incarcerated. All incarcerated femoral hernias got repaired with TAPP. We performed 90 TAPPs (86.5%) and 14 TEPs (13.5%) in the preservation group, and 93 TAPPs (65.5%) and TEPs 49 (34.5%) in the transection group (P=0.002). The average ages in preserved and transected groups are 41.2±1.7 and 62.3±1.2 year-old (P<0.000) respectively. The time of operation in preserved group is 31.3±1.3 minutes, compared to 25.0±1.0 minutes in transected group (P<0.000). The post-operative hospitalization is 1.5±0.2 days. All patient returned to normal activity within 2 weeks. No recurrence were noted in the follow-ups.
Conclusion: It is feasible to apply laparoscopic procedures for groin hernias in female patients. The surgeon should thoroughly evaluate multiple factors, including age, time of operation, recurrence and so on, before transecting the round ligament. Both peritoneum dissection and re-suture technique and inner ring keyhole technique are available for the preservation.

AS32-3

Inguinal endometriosis: a retrospective study

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Introduction: There are very few reports on endometriosis localized to the canal of Nuck. The purpose of this study is to retrospectively examine the findings of the canal of Nuck and inguinal endometriosis in adult female inguinal hernias.
Methods: Between April 2003 and July 2016, adult groin hernia repair was performed on 5,282 patients (>18 years-old, 4,348 males/934 females). In all females (age:49±18, 18-93), 189 patients (20.2%, age: 40±9, 21-72) had indirect hernias with the canal of Nuck. In indirect hernia with the canal of Nuck, the author performed the resection of the hernia sac, the canal of Nuck and the round ligament as much as possible in addition to the hernia repair. The diagnosis of endometriosis was provided by pathological examination. The patient characteristics, pathological diagnosis and treatment outcomes were recorded in indirect hernias with the canal of Nuck.
Results: Inguinal endometriosis was diagnosed in 68 patients (7.3%, age: 40±8, 25-62) pathologically. Three patients complained of painful masses in groin coincident with menstrual cycles within one year after operation. These patients underwent a second operation, where residual endometriosis in a groin region was proven pathologically. Intotal, we recorded 71 inguinal endometriosis (7.6%) in all female patients undergoing hernia repair in our institute.
Conclusions: The canal of Nuck and inguinal endometriosis in female indirect hernia is not rare. The complete resection of the hernia sac including the canal of Nuck and the round ligament is very important to prevent groin pain due to inguinal endometriosis.

AS32-4

Diagnosis and Treatment: Differentiation of Inguinal Hernia from Other Diseases in Female Patients

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Introduction: Inguinal herniorrhaphy is one of the most common surgical procedures, and females have a lower risk than males. Ultrasonography is a reliable tool to diagnose an inguinal hernia and surgical treatment is required. Most common herniated organ in female is the omentum. However, hydrocele of the canal of Nuck and solid mass are clinically similar to inguinal hernia so differentiation of inguinal hernia from these is important.
Methods: 893 adult patients (over 20 years old) with hernia symptoms visited our hospital from September 1st, 2012 to June 31st, 2016. Of 893, 120females patients were retrospectively analyzed.
Results: Of 120 patients, there were 75 inguinal hernia patients, 37 hydrocele patients, 7 lipoma patients, 1 angioleiomyoma patients. In case of hydrocele patients, 8 of them had communicating hydroceles and 29 of them had encysted hydroceles. However, ultrasonography could not exactly diagnose between communicating and encysted hydrocele. Lipoma and angioleiomyoma were difficult to differentiate from inguinal hernias which were protruded omentum due to similarity of physical examination and clinical symptoms and hyperechoic round shape of ultrasonographic scan, but surgery confirmed the diagnosis.
Conclusion: In female patients, there are high rate of hydrocele, and diagnosis using ultrasonography cannot differentiate other diseases such as lipoma and solid tumor from inguinal hernia, and usually correct diagnosis is intraoperatively confirmed. Inguinal hernias in female patients need to be diagnosed carefully and all these other disease can be treated with TAPP and intracorporeal excision due to the clinical similarity to inguinal hernia.

AS32-5

Laparoscopy for repair of Groin hernia in Asian female cohort: Is the approach better?

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Introduction: In female patients, laparoscopy seems an attractive approach for all inguinal hernias due to the greater prevalence of femoral hernia and these synchronous hernias are often missed.
Methods: Between Jan 2006 and May 2015, 54 consecutive female patients underwent laparoscopic surgery for groin hernia. Patient demographics, hernia characteristics, operating time, conversion rate, intraoperative, postoperative complications and recurrence were measured. 45 patients had inguinal hernia, 6 femoral hernia, 2 inguinal with obturator and 1 both inguinal and femoral hernia. 45 patients underwent a totally extra-peritoneal (TEP) repair and 9 patients underwent a trans-abdominal pre-peritoneal (TAPP) repair. 1 patient in each group underwent SILS.
Results: 51 patients had primary and 3 recurrent hernia. One of these 3 patients presented with an immediate femoral recurrence after a previous open repair of an inguinal hernia suggestive of missed femoral hernia. One patient with synchronous femoral hernia and 2 with obturator hernia were not detected preoperatively. An inguinal with a synchronous occult hernia was only diagnosed during the laparoscopy. The overall mean operative duration was 63 minutes (range 34-112 minutes). One patient required conversion to open due to adhesions from previous surgery. Three patients developed seroma and one hematoma postoperatively. No recurrences were recorded.
Conclusion: Laparoscopic repair offers accurate diagnosis and simultaneous treatment of both inguinal and femoral hernia with minimum morbidity and good clinical outcomes. Laparoscopic repair has become the procedure of choice for the treatment of the majority of groin hernia of women at our institution.

AS32-6

Report of 41 cases of round ligament varicosities that easily misdiagnosed as inguinal hernia

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Purpose: To investigate the differential diagnosis with inguinal hernia and clinical management of round ligament varicosities (RLV).
Methods: Retrospectively analyzed clinical materials of 41 cases of RLV diagnosed by coloured Doppler ultrasound in our hospital during January 2011 to December 2015. Newly diagnosed Department, rate of misdiagnosis, clinical and sonographic features, management after diagnosis and prognosis were recorded.
Results: All of the 41 cases were pregnant female with average age of about 34.5 years old. 28 cases were firstly misdiagnosed as inguinal hernia (68.3%). 30 cases complained of mass in the inguinal area (73.2%), 25 cases swelling pain as well as mass (61.0%), and 4 cases swelling pain without mass (9.7%). 7 cases were diagnosed during routing pregnant examination of ultrasound without any complaints (17.1%). All cases were justified a wait-and-see policy. 37 cases were followed until 3-6 months after delivery (follow-up rate was 90.2%). Mass or swelling pain disappeared spontaneously postpartum in all cases.
Conclusions: Most of the RLVs are seen in pregnant female and easily misdiagnosed as inguinal hernia. Colored Doppler ultrasound of the inguinal area is the best examination to make a collect diagnosis. It recommended to manage conservatively after diagnosis.

AS33-1

Should we repair Diastasis Recti?

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Diastasis recti describes a condition in which the two rectus abdominis muscles are separated by an abnormally wide distance. Usual causes of diastasis recti are multifetal pregnancy and obesity. Diastasis recti was classified by Nahas; Type A; Patients have a classic rectus diastasis caused by pregnancy and a well-defined waistline.Type B: who present rectus diastasis secondary to pregnancy and do not have adequate tension of the lateral and infraumbilical areas of the myoaponeurotic layer. Type C; Patients present a congenital lateral insertion of the rectus abdominis muscles at the costal margins Type D; Patients with rectus diastasis and poor waistline definition are included in this group. Between Feb 2005 July 2007, 12 cases of diastasis recti repair was done. All patients were female. Median age was 35 years old (30-43). Median of Body Mass Index was 23.6 (17.9-36.1). Average operation time was 129 minutes (80-210). All patients stated they found abdominal bulging after delivery. Seven patients had one delivery history and 6 patients had two delivery histories. One patient had three delivery histories. Two patients had twin delivery history. Open repairs were 2 cases of sublay mesh techniques (retrorectal), 2 cases of open repair with abdominoplasty and 1 case of open repair with abdominal subcutaneous flap. Laparoscopic repairs were 4 cases of IPOM (intraperitoneal onlay mesh) technique and 4 cases of IPOM and linea alba closure with transfascial fixation device. Complaints of patient are the most important factors for decision making of diastasis recti repair.

AS33-2

Midline reconstruction strategies in diastasis recti

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Abdominal wall weakness from diastasis recti is extremely common in general populations, especially amongst women after childbirth. Traditionally, the surgical approach has been to avoid surgery, or in some cases to refer them for abdominoplasty. While laparoscopic techniques have been described for midline reconstruction, they involve intraperitoneal implantation of large pieces of synthetic mesh, with its potential complications.The authors describe the various techniques of midline reconstruction in this condition, and this is directly applicable in ventral hernia repairs as well. These techniques include: double layer suture plication, plication with bariatric surgery in the obese, e-TEP Rives-Stoppa repair, and subcutaneous endoscopic midline plication with onlay mesh repair.