Laparoscopic single instrument closure of inguinal hernia in female children: A novel technique

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Background: Inguinal hernia repair is the most common operation performed by pediatric surgeons, and herniotomy through a groin incision is the gold standard. Recently minimal access surgery (MAS) has challenged this conventional surgery. At the moment, cosmesis became the target of all MAS especially in female. So, MAS techniques have developed to become more minimally invasive, from 3 to 2 and now single port technique. However, most recent emerging techniques show a tendency for simple extracorporeal suturing with subcutaneous knotting, which has many drawbacks. We introduce a novel technique for laparoscopic repair of inguinal hernia in female children using laparoscopic single instrument closure (LSIC) with intracorporeal knotting. **Patients and methods:** This prospective study was conducted at Al-Azhar University Hospital, between February 2012 and August 2014. Sixty girls with 68 congenital inguinal herniaswere subjected to LSIC. Criteria for enrollment include: female gender, unilateral or bilateral inguinal hernia. Exclusion criteria include: recurrent hernia, hernia in morbid obese children, complicated hernia, girls who could not tolerate pneumoperitoneum. The main outcome measurements include: operative time, feasibility of the procedure, complications and cosmesis. **Results:** A total of 60 girls with 68 congenital inguinal hernias were subjected to LSIC, with a mean age of 2.2 ± 2.25 years (range = 0.58–10.00 years). Complete purse string of internal inguinal ring (IIR) with intracorporeal knotting was done for all cases. All cases were completed laparoscopically without conversion. The mean operative time was 10.5 ± 2.2 minutes for unilateral hernia repair and 20 ± 4.3 for bilateral cases. All patients achieved full recovery without intraoperative or postoperative complications. **Conclusion:** LSIC of inguinal hernia in female children is feasible, simple, secure and more cosmetic. It avoids the drawbacks of extracorporeal knotting.

Key words:

Minimal access surgery, Single instrument closure, Female hernia