Research Article

Trans Hernial Sac Laparoscopic Detection of Clinically Non Evident Contralateral Congenital Hernia in Pediatrics

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Abstracts
Introduction: Inguino-scrotal swellings are one of the commonest anomalies in pediatric age groups. Most of them are related to the abnormalities of descent of testis and failure of obliteration of processus vaginalis. Among these, the most common congenital anomalies are inguinal hernia and hydrocele.[1] **Patients and Method: A) Patient selection and preoperative preparation:** This is a prospective study that has been held in pediatric Surgery unit, Minia University Hospital on 100 patients had unilateral congenital hernia February 2016 and February 2018. Informed consents from parents of all patients have been taken before entering the study. **Results:** One hundred pediatric patients with unilateral inguinal hernia were operated by classic technique followed by laparoscopic. **Discussion:** Inguinal hernia is a very common condition in children and adults and is the most common operation performed on children (other than ritual circumcision). **Conclusion:** Trans hernial sac laparoscopic exploration of unilateral congenital inguinal hernia in infant with in evident hernia on other side is simple, safe, effective technique, non time consuming procedure, no additive complications with no morbidity or mortality.
Keywords: Trans hernial sac laparoscopic, Contralateral Congenital Hernia

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Introduction
Inguino-scrotal swellings are one of the commonest anomalies in pediatric age groups. Most of them are related to the abnormalities of descent of testis and failure of obliteration of processus vaginalis. Among these, the most common congenital anomalies are inguinal hernia and hydrocele. [1]

The natural history of contralateral patent processus vaginalis (CPPV) is not fully understood, and its presence does not necessarily lead to the development of metachronous contralateral inguinal hernia (MCIH). The reported incidence of MCIH after unilateral inguinal hernia repair, at 5.6% to 29%, is much lower than that of laparoscopically evaluated CPPV, which is at 32. To 56%. The initial aim to inspect the contralateral groinl laparoscopically is to avoid unnecessary exploration of the negatively evaluated processus vaginalis (PV).[2]

The incidence of congenital inguinal hernia depends on age. The Incidence is highest in premature infants. The incidence may be as high as 60% in infants born at 500e750g. Nearly one-third of infants with a birth weight less than 1000g will develop an IH. Term infants have an IH incidence of 3-5%. The overall incidence of childhood inguinal hernia is 0.8-4.4%. Inguinal hernia repair is considered the most frequently performed pediatric surgical operation. Congenital inguinal hernias are between four and ten times more common in boys than girls. In boys, CIH occur on the right in 60-70%, left 20-25% and bilaterally in 5-15%. Laterality is equal in girls. [3]

Patients and Method
A) Patient selection and preoperative preparation:
This is a prospective study that has been held in pediatric Surgery unit, Minia University Hospital on 100 patients had unilateral congenital hernia February 2016 and February 2018. Informed consents from parents of all patients have been taken before entering the study.

a) Inclusion criteria:

This study will include patients with:

1. Unilateral inguinal hernia less than 1 year.
2. Both sexes.

b) Exclusion criteria:

This study will exclude patients with:

1. Bilateral inguinal hernia.
2. Recurrent hernia.
3. complicated hernia.
4. Patients who could not tolerate pneumo-peritoneum (e.g., congenital heart disease)
5. More than 1 year.

Results

One hundred pediatric patients with unilateral inguinal hernia were operated by classic technique followed by laparoscopic Trans hernial sac exploration of other side. Their age is up to 1 year. 28 patients were preterm and 72 patient were full term. Clinically, 54 of the patients had right sided inguinal hernia, 46 had left sided inguinal hernia. the fifty cases were 58 males and 42 females.

Postoperatively, 72 patients were discharged the same day of the operation. 28 patients were discharged on the second postoperative day. All 28 patients were preterm, 6 patients for delayed recovery, 2 patients for postoperative apnea, and 7 patients were residing far away from the hospital.
(Table) .

Table: Table of post operative discharge. (hospital stay)

Site of hernia	The same day	Next day	Total
Rt sided	38 (70.4%)	16(29.6%)	54(100%)
Lt sided	34(73.9%)	12(26.1%)	46(100%)

Discussion

Inguinal hernia is a very common condition in children and adults and is the most common operation performed on children (other than ritual circumcision). Since the classic open surgery in pediatric patient was introduced (the standard repair involves a small groin incision on the affected side, with or without incision of the external oblique muscle and opening of the external ring, dissection of the hernia sac, and high ligation and excision of the sac), it has become the standard operation for hernias, with very few controversies: whether the surgeon should perform only a herniotomy, whether a contralateral groin exploration be performed. The operation is quick, safe, and can be done in an outpatient setting with anesthesia via a laryngeal mask. The recur-ence rate is acceptable, 1-3%, depending on the expertise of the surgeon, the child age and concomitant diseases.

Until laparoscopy developed, there was controversy regarding whether a contralateral groin exploration should be performed and to whom. On the one hand, an exploration ensured a diagnosis during one operation and anesthesia, an option that carries many advantages to the patient and the parents. On the other hand, most of these explorations performed on children above the age of 1 year were negative and doubling the operating and anesthetic time. Therefore, most surgeons had

loosely based criteria on whom the exploration was performed. Since a hernia can be very easily and accurately diagnosed from within the peritoneum, introduction of a laparoscope during the operation seemed like a natural answer for the question.

Conclusion

Trans hernial sac laparoscopic exploration of unilateral congenital inguinal hernia in infant with in evident hernia on other side is simple, safe, effective technique, non time consuming procedure, no additive complications with no morbidity or mortality. This approach is used at the pediatric surgery unit of Al-Minia University hospitals for patients with unilateral congenital inguinal hernias.

It had 100% sensitivity and specificity in our study in follow up 6 months.

We recommend routine use of this technique for infants have unilateral congenital inguinal hernia with non evident hernia on other side whom less than one year especially preterm babies.

Further goal: increase sample size and duration of follow up for establishing it as routine.

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