Trakia Journal of Sciences, Vol. 10, Suppl. 2, 202-204, 2012

Available online at:
http://www.uni-sz.bg

ISSN 1313-7050 (print)
ISSN 1313-3551 (online)

FEMORAL HERNIAS IN CHILDREN

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ABSTRACT
Femoral hernias are less frequently seen than inguinal hernias and make up only 1 to 2% of all groin hernia series in pediatric age group. We reviewed retrospectively the medical records of all patients who underwent femoral hernia repair in our institution between 2001 and 2012. Twelve children (9 females, 3 males) with the median age of 6.5 years underwent femoral hernia repairs over an 11-year period. Of the 12 children, 9 (75%) were females and 3 (25%) were males. The youngest patient was 3 years old and oldest-17 years old. Correct preoperative diagnosis was obtained in 3(25%) cases. In 9 (75%) of children diagnosed has been demonstrated intra-operative. All children were operated successfully - it is done herniotomia and plastica. The study shows that femoral hernia is still often misdiagnosed condition. The correct preoperative diagnosis leads to appropriate surgery and prevent complications and recurrences.

Key words: Femoral hernia, childhood

INTRODUCTION

Femoral hernia is a rare surgical entity in pediatric age group. The incidence is only 1 to 2% of all groin hernias in children (1-5). They are often clinically overlooked and presented either as recurrence of groin swellings following inguinal hernia repairs, or as an intraoperative finding(6, 7). Our aim is to review our experience and compare it with others.

PATIENTS AND METHODS

We reviewed retrospectively the medical records of all patients who underwent femoral hernia repair in our institution between 2001 and 2012. The files of the patients were reviewed regarding the age at the time of presentation, sex, diagnosis and localization.

RESULTS

The results of the study are presented in **Table 1**. Of all 12 children operated on occasion femoral hernia, 9 (75%) are females and 3 (25%) males, 9 (75%) left side and 3 (25%) right side Age ranged from 3 to 17 years. Correct preoperative diagnosis is made in 3 (25%) of the children **(Fig. 1a, b)**. Nine patients (75%) had incorrectly been diagnosed as inguinal hernias. In these cases, the correct diagnosis- femoral hernia was made intra-operatively during the surgical repair. All children were operated successful when 8 (67%) were accessed through low (infrainguinal) incision using Copper's type of repair. The other 4 cases were approached through high (inguinal) incision using McVay type of repair **(Fig. 2.a, b).** Only in one (8%) patient recurrent femoral hernias occurred, 3 years after initial hernia repair. After surgical treatment no recurrence was reported.

DISCUSSION

A femoral hernia is the protrusion of the abdominal contents through the femoral canal. It accounts for less than 1% of all groin hernias in children and is often confused with inguinal hernia or other inguinal pathologies. Preoperative misdiagnosis has been reported to be between 40 and 75%.

Sir Astley Cooper was the first who described in 1827 two cases of femoral hernias in paediatric age group in two girls (1-9). The exact ethology of femoral hernia is still a matter of discussion (10). Our study reveals that diagnosis of femoral hernias in children is still a challenging issue. In previous reports correct pre-operative diagnosis ranged from 25% to 40% which may be increased up to 90% by combining raised awareness and a

careful physical examination of a swelling (10). Difficulty with diagnosis should be related to the rarity of the condition in children, inexperience f the surgeon, the more frequent occurrence of inguinal hernia, inadequate physical examination, and failure to look for a femoral hernia when no inguinal hernia was found (12, 13).

Fig. 1. a, b. Examination preoperatively.

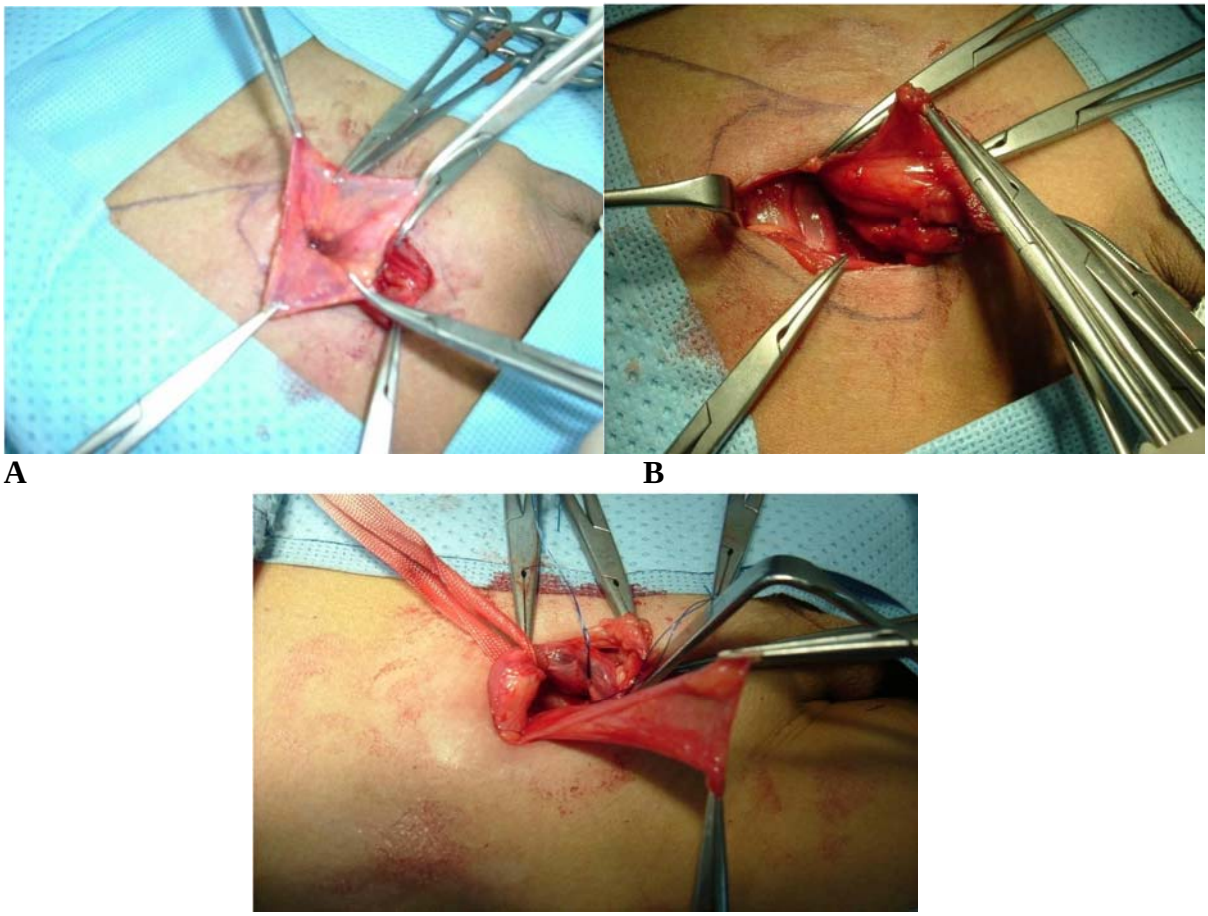
Tabl. 1. *Ages.sex location and befor and intraoperatively results.*

Ages	Sex	Location	Befor OP	Intraoperatively
3	F	Right	H.iguinalis	H.femoralis
3	F	Left	H.iguinalis	H.femoralis
5	H	Right	H.femoralis	H.femoralis
6	F	Right	H.iguinalis	H.femoralis
6	F	Right	H.femoralis	H.femoralis
8	F	Left	H.iguinalis	H.femoralis
10	F	Right	H.iguinalis	H.femoralis
10	H	Right	H.iguinalis	H.femoralis
11	F	Right	H.iguinalis	H.femoralis
13	F	Left	H.iguinalis	H.femoralis
14	F	Right	H.femoralis	H.femoralis
17	H	Right	H.iguinalis	H.femoralis

CONCLUSIONS

A correct preoperative diagnosis will lead to appropriate surgical management, thus avoiding unnecessary morbidity and preventing unnecessary reoperations.

A preceding inguinal hernia appeared to favour femoral hernia in childhood. In our view, preoperative diagnostic examination of children using sonography is an absolute requirement. Our surgical method consisted of closing the hernial orifice using a continuous double-row suture.



A **B**

C

Fig. 2 a, b, c. Intraoperatively pictures for Femoral hernias.

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