

Case Report

Encysted Hydrocele of the Canal of Nuck

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Abstract

Hydrocele of canal of nuck is an uncommon disorder in a female child and it is homologous to hydrocele of spermatic cords in male. The canal of nuck is normally obliterated in the first year of life, failure to achieve complete obliteration results in an indirect inguinal hernia or cyst of canal of nuck. We report a case of a hydrocele of canal of nuck in a two year-8month old girl.

Keywords: Inguinal hernia; Canal of nuck; Hydrocele

Introduction

Hydrocele of canal of nuck is an uncommon disorder in a female child and it is homologous to hydrocele of spermatic cords in male. The canal of nuck is normally obliterated in the first year of life, failure to achieve complete obliteration results in an indirect inguinal hernia or cyst of canal of nuck. We report a case of a hydrocele of canal of nuck in a two year-8 month old girl.

Case Presentation

A two years and 8-month old girl presented to our emergency department with a painless months left sided inguinal swelling. Mother noticed the swelling 12 hours prior to presentation, the swelling was not progressing in size, and there was no history of trauma, vomiting, abdominal pain or change in bowel habits.

On Examination, a well-defined, oval shaped swelling of about 2 cm × 3 cm was observed in left groin, the swelling was irreducible, firm, non-tender, with normal overlying skin. Rest of the systemic examination was unremarkable. Routine laboratory investigations were within normal limits. Diagnosis of irreducible left inguinal hernia with sliding ovary was made. So, trial of gentle manual reduction was done under conscious sedation but it was unsuccessful.

Patient underwent surgical exploration, through left inguinal skin crease incision; inguinal canal was exposed by conventional dissection. A cystic swelling extending down to left labia major was identified to be encysted hydrocele of canal of nuck with no hernia associated with it, careful dissection and isolation of cyst from round ligament was achieved, high ligation of sac, removal of cyst was done and sent for Histopathology, wound was closed in layers (Figure 1). Postoperatively period remained uneventful and patient was discharged on next day with regular follow-up in Clinic. The histopathology result confirmed the diagnosis of hydrocele of canal of nuck.

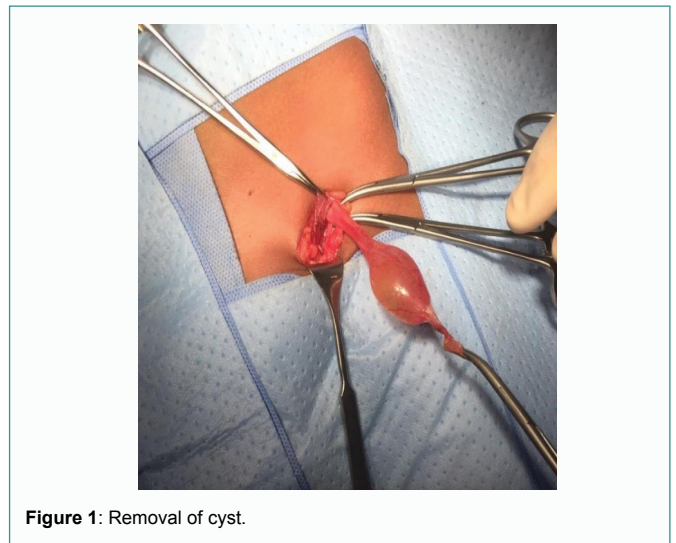


Figure 1: Removal of cyst.

Discussion

A hydrocele of canal of nuck is a rare disorder in female which is equivalent to processus vaginalis in males. It usually obliterates within 8 months of gestation. The canal of nuck was first described in 1691, by a Dutch anatomist Anton Nuck. There are three types of hydrocele of canal of nuck. The most common presentation is Type 1, which is characterized by unilocular encysted hydrocele, without communication to peritoneal cavity. Type 2 is persistent communication between hydrocele and peritoneal cavity and Type 3 is rarest form of hydrocele which is an hourglass appearance, where internal inguinal ring is compressed by a large hydrocele [1]. In our case, it was type 1, and presented as painless, irreducible inguinal swelling, with suspected incarcerated inguinal hernia.

The differential diagnosis for inguino-labial swelling in female include indirect inguinal hernia, adenopathy, post traumatic hematoma, vulvovaginal cyst and rare tumors (lipoma, cystic lymphangioma, leiomyoma) [2-4]. Hydrocele of canal of nuck is rare cause of inguino-labial mass in females, specialty in infants and children, so the diagnosis on the basis of clinical examination is challenging.

Literature also reported the use of radiological investigations such as Ultrasound, MRI in the diagnosis, describing it as well defined hypoechoic or anechoic, sausage or comma shaped mass fluid containing in inguinal area [5,6]. However, our patient did not have any

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radiological investigation as it was diagnosed as incarcerated inguinal hernia containing ovary on the basis of clinical examination. Open surgical excision of cyst and ligation of neck of processus vaginalis is found to be adequate option for surgical treatment, in addition to this, laparoscopic excision has been reported in the literature [7]. Choi et al. [5] reported the occurrence of inguinal hernia on contralateral side from hydrocele and possibility of contralateral hydrocele. In our case there were no any findings of contralateral inguinal hernia.

Conclusion

Hydrocele of canal of nuck is an uncommon condition that should be considered in differential diagnosis of female child with inguinal swelling. Diagnosis is established by clinical examination only by good clinical skills and experience.

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