Research Paper

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Encysted Hydrocele of Canal of Nuck in an Elderly Female; A Rare Case Report and Review of Literature

Medical Science

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ABSTRACT

The canal of nuck is an patent pouch of peritoneum extending into the labia majora of women, which accompanies the round ligament of uterus. It is analogous to the processus vaginalis in males. When processus vaginalis fails to obliterate, it can result in a hernia or hydrocele both in male in female. The incidence of hydrocele canal of nuck is rare over all and very rare in elderly female. We present a case of a encysted hydrocele canal of nuck, left side in 65 years female.

INTRODUCTION

In females, a peritoneal fold usually accompanies the round ligament as it descends into the labia majora through the inguinal canal. Typically , this extension of peritoneum obliterates into a fibrous cord by the first year of life. Failure of obliteration results in a communication with the peritoneal cavity through a persistent canal of nuck resulting in inguinal hernia or hydrocele. This is analogous to a patent processus vaginalis in the male.

CASE REPORT

A 65 years female presented to surgery OPD with a non tender palpable swelling in the left inguinal region. On detailed history, the swelling does not change in size over past 2 years. On physical examination, the swelling was non- tender, mobile , cystic and transilluminating. No other abnormalties recorded except hypertension[figure-1].On ultrasonography of the inguinal region reveals cystic swelling with internal septations and few internal echoes noted within intramuscular plane of the left groin. After hypertension medically controlled patient underwent surgical exploration of the swelling through a leftt inguinal inscision. After careful dissection through skin, subcutaneous tissues, scarpa`s fascia, and external oblique aponeurosis, the cystic swelling of the cord was identified and isolated.[figure-2] .The swelling was confirmed to be an encysted hydrocele canal of nuck with no evidence of associated inguinal hernia. After excision of hydrocele, the fibrous connection toward the deep inguinal ring was ligated and rest of the wound was closed in layers. Patient`s followed-up at 4th week and 4th month revealed normally healed incision with no recurrence.

DISCUSSSION

During fetal development in the male, the testicle descends through the inguinal canal into the scrotum pulling along a sac-like extension of the peritoneum. By the first year of life, this extension condenses into a fibrous cord, the processus vaginalis, preventing the communication of peritoneal cavity with the scrotum. If this processus vaginalis remains patent can form into hydrocele when there is secretion or communication to peritoneal cavity or it can form hernia. Congenital hernia or hydrocele, though more common in males, is rarely seen in females. In female fetal development, round ligament of the uterus descends into the inguinal canal to the labium majora.

The peritoneal fold that descends the round ligament is named the canal of nuck. If by the first year of life this communication fails to close, it can also result in an indirect hernia or a hydrocele[1-3].

Most of the case reports of hydrocele canal of nuck has been described in infants and children but also has been reported in elderly females. [4,8]

The most common type of hydrocele of the canal of nuck corresponds to the encysted hydrocele of the cord in the male. There is no communication with the peritoneal cavity and the cyst may be found anywhere along the course of the round ligament from the internal ring to the vulva. Such hydroceles may be multilocular. A second type corresponds to the congenital hydrocele of the male with a communication between the hydrocele and the general peritoneal cavity. The third type is combination of two as a result of the inguinal ring constricting the hydrocele like a belt so that part is communicating and part is enclosed, giving this the name of hourglass type. However, any of these types of hydrocele are extremely rare in females[4].

The differential diagnosis for an inguinal mass in a female includes indirect hernia, lipoma,lymphadenopathy, cold abscess, bartholin`s cyst, post traumatic hematoma, rarely cystic lymphangioma, neuroblastoma metastasis in groin and ganglion[1,5,6]

In conclusion, an encysted hydrocele of canal of nuck though rare entity should be considered in the differential diagnosis in females presenting with an inguinal swelling. Establishing a definitive diagnosis on clinical examination is difficult, radiological imaging may assist in diagnosis, final diagnosis is made during surgery and confirmed by pathological examination[7]. Surgical excision of the encysted hydrocele of canal of nuck is the standard treatment of choice.

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