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Case Report

Pediatric Femoral Hernia Associated with a Fibrolipoma: A Case Report And Review of Literature

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Introduction

Femoral herniae are uncommon in childhood, accounting for less than 1% of all groin hernia [1,2]. Preoperative misdiagnosis rate of 40 to 75% has been attributed to relative rarity of these lesions [2-4]. With a correct diagnosis and an appropriate surgical management, it is possible to prevent possible complications such as intestinal necrosis and perforation due to strangulation of the involved viscera and even mortality from delayed presentation and treatment [5,6]. A 5-year-old boy with a femoral hernia associated with a fibrolipoma at the tip of hernia sac was surgically treated. To the best of our knowledge, this is the first pediatric report of a combination of femoral hernia and fibrolipoma and this information adds to the literature that femoral hernia and fibrolipoma can be seen together as distinct entities in children.

Case

A 5-year-old boy was admitted to our clinic with a swelling that was located below the inguinal ligament (Figure 1). The mass was found to be irreducible and nontender upon physical examination. History obtained from his family revealed that the mass was initially small but it became prominent over the last months. Ultrasonography (US) of the groin demonstrated a hernia sac with a narrow neck located at the medial border of epigastric artery that contained omentum and free fluid. The patient underwent surgical intervention with an infrainguinal groin approach.

Figure 1: Swelling at the right groin that was located below the inguinal ligament.

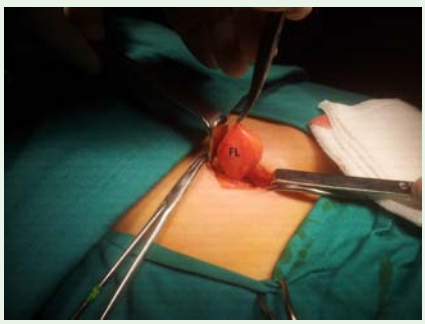

Figure 2: Operative view. Note a femoral hernia containing omentum with a fibrolipoma located at the tip of the sac.

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A femoral hernia containing omentum with a lipomatous mass of 2 cm in diameter located at the tip of the sac was found (Figure 2). Total excision of the mass in addition to the repair of femoral hernia with Cooper's ligament repair (McVay's technique) was performed. The histopathological examination of the excised specimen revealed a fibrolipoma composed of mature adipose tissue seperated by dense connective tissue. Postoperative course was uneventful and the patients is well with no recurrence of either femoral hernia or fibrolipoma.

Discussion

Femoral hernia is a protrusion of the peritoneal sac through the femoral canal. It accounts for less than 1% of all groin herniae in children [1, 2]. Preoperative misdiagnosis of 40 to 75% in patients with femoral herniae stems from the confusion with other inguinal pathologies including inguinal hernia, lymphadenitis, hydrocoele or others [2-6]. Insufficient physical examination and inexperience about childhood femoral herniae may also play a role in misdiagnosis and therapeutic failure. However our patient underwent surgical treatment with a correct preoperative diagnosis of femoral hernia which after histopathological examination turned out to be a femoral hernia associated with fibrolipoma. Preoperatively we neither could detect the fibrolipoma located at the tip of the hernia sac on physical examination nor US revealed the lipomateous mass. This may be due to insufficient coordination of the child during physical examination.

A near-equal sex distribution has been reported with right-sided femoral herniae constituting 58-77% of cases [4,7]. The hernia was right sided in our case in accordance with those patients previously reported [4,7]. Although the etiology of femoral hernia remains unclear, according to McVay and Savage's hypothesis, a congenitally narrow insertion of the posterior inguinal wall on to Cooper's ligament results in enlargement of femoral ring which in the event of raised intra-abdominal pressure predisposes to herniation of the abdominal viscera [8]. Although a previous inguinal herniotomy has also been suggested as an other etiological factor, many believe that this association may reflect a missed femoral hernia [3,9]. Nevertheless anatomical variations of the femoral canal together with acquired factors might be a possible explanation for pediatric femoral herniae.

Typical presentation of a femoral hernia is a swelling below and lateral to the pubic tubercle. Various abdominal viscerae may be trapped in the hernia sac including omentum, intestines. When appendix vermiformis is found in the sac it is called as De Garengeot's hernia [10]. An experienced physician may correctly diagnose femoral hernia but this may be a rare occurence. In suspicous cases radiological imaging modalities including US and Magnetic Resonance İmaging (MRI) may be used for confirmation of the diagnosis. US was found to be useful for confirming femoral henia in our case preoperatively.

Fibrolipomas are extremely rare subtype of lipomas composed of mature adipocytes, which are commonly benign [11]. Various suggestions have been proposed in the etiology of these masses including endocrinal imbalance or maturation of lipoblastomatosis [12]. They are characterized by the presence of adipose tissue and abundant amount of fibrous tissues [11,13,14]. These masses present as asymptomatic, slowly growing mass with well circumscribed [15]. Various areas of the body may be involved by the mass including oral cavity, trachea, esophagus, parotid gland, spermatic cord, colon, nose and eyelid [11,15-17]. Although fibrolipomas are benign tumors, there are few cases of conversion to liposarcoma [15]. No matter which part of the body involves total excision should be the goal. Detailed physical examination of our patient revealed that except an association with a femoral hernia, that no other site was involved by fibrolipoma in our patient and total excision was performed in addition to femoral hernia repair. During surgical intervention fibrolipoma was found to be located on the outer aspect of the hernia sac. It was postulated to originate from pre-peritoneal fat.

In conclusion femoral hernia and fibrolipoma may coexist in the same patient and to our knowledge this is the first pediatric report of a combination of femoral hernia and fibrolipoma. Total excision is the gold standard for diagnosing fibrolipoma. This information adds to the literature that femoral hernia and fibrolipoma can be seen together as distinct entities in children and should be treated accordingly.

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