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CASE REPORT

A Rare Cause of Inguinal Mass: Round Ligament Cyst

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ABSTRACT: Round ligament mesothelial cyst is a rare cause of inguinal mass. Round ligament cysts are generally diagnosed during surgery in cases with pre-diagnosis of inguinal hernia. In this study, we aim to present two cases of patients who have reported to our clinic complaining of a mass in the inguinal region and who were diagnosed with round ligament cyst via ultrasound, magnetic resonance images and surgery images.

KEYWORDS: Inguinal hernia, Round Ligament, Cysts

INTRODUCTION

Mesothelial cyst of the round ligament is a rarely seen developmental pathology [1]. Generally, it is wrongly diagnosed due to also considering a diagnosis of inguinal hernia and it is detected intraoperatively during exploration [2]. It is noted that these cysts are usually asymptomatic or present signs and symptoms of irreducible inguinal hernia and are most commonly seen in women in their third or fourth decade of life [1,2].

CASE REPORT

Case 1: During physical examination of a 50-year-old female patient, who reported to the clinic complaining of swelling in the right inguinal region, a palpable, well-circumscribed mass limited to the inguinal canal was observed. During superficial tissue ultrasound (US), a well-circumscribed anechoic lesion with a size of 28x13 mm located 1.2-cm deep from the right inguinal area and a second cystic lesion consisting of fine septation with a size of 34x12 cm near that lesion were observed. In pelvic magnetic resonance imaging (MRI), a cystic lesion with an approximate size of 8x3 cm consisting of lobulated contoured internal septations moving in the subcutaneous soft tissue towards the right mons pubis level with a beginning near the right round ligament of the uterus within the right inguinal canal was observed. (Figure 1)

Case 2: A 42-year-old female patient reported to our polyclinic with swelling and complaints of pain in the right inguinal area. In her US examination, a thick-walled cystic lesion with a size of 57x18.5x32mm with no vascular signals from its internal area and wall was observed in the right inguinal canal. In MRI examination, which was performed to determine the origin of the lesion and to make a definitive diagnosis, a cystic lesion with a size of 60x25x29 mm extending from the right inguinal canal to the labium was observed. (Figure 2)

Surgical excision and mesh plug repair were applied to both patients; the patients were discharged on the 1st postoperative day without any complications. Histopathologic examination of cystic structures was reported as round ligament mesothelial cysts.

DISCUSSION

The round ligament of the uterus originates at both uterine horns, leaves the pelvis through the deep inguinal ring and attaches to the labium majus [3]. Two theories have been suggested for development of round ligament cysts. The first theory involves flawed obliteration of the canal of Nuck similar to the development of spermatic cord hydrocele in males;according to this theory, a round-ligament cyst is the same disease as cyst of the canal of Nuck [4]. Another theory involves the inclusion of embryonic mesenchymal mesothelial elements or remnants during the development of round ligament [4].

In the literature, it is noted that these rare cysts are seen in women in their third or fourth decade of life [1,2]. Generally, they are wrongly diagnosed due to considering a diagnosis of inguinal hernia [2]. Clinically, patients report complaining of a movable, non-reducible mass in the inguinal region, with present, uncomfortable and vague pain [5]. Right sided preponderance was observed in 66.6% patients and 30% to 50% patients had clinically insignificant inguinal hernia [5]. Ultrasonography, as a non-invasive technique, is the imaging modality of choice for evaluation [4,6]. MRI is a more expensive option, that shows more detailed adjacent anatomic structures and should be the preferred method in complex diagnostic cases. (2). T1-weighted and T2-weighted images in MRI revealed a cystic, thin-walled structure consisting of hypointense lesions [6].

Definitive diagnosis was confirmed histopathologically due to demonstration of multilocular cysts covered with single layer mesothelial cells. [4,5].

Surgical excision is the treatment of choice for symptomatic and growing cysts [7]. US guidance cyst aspiration has also been described but resulted in quick fluid re-accumulation [8].

CONCLUSION

Round ligament cysts should be included in differential diagnosis of the inguinal mass in the female patient. Imaging studies such as US and MRI help in preoperative diagnosis and give a chance of

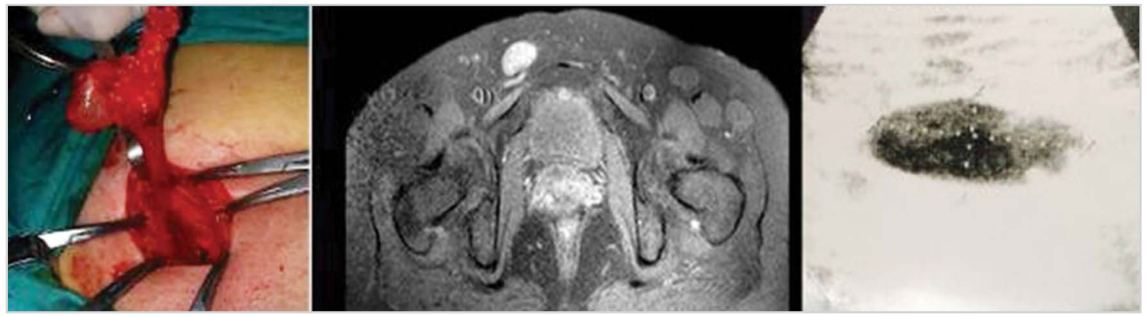

Fig. 1. Intraoperative findings, MRI findings and US findings of first case.

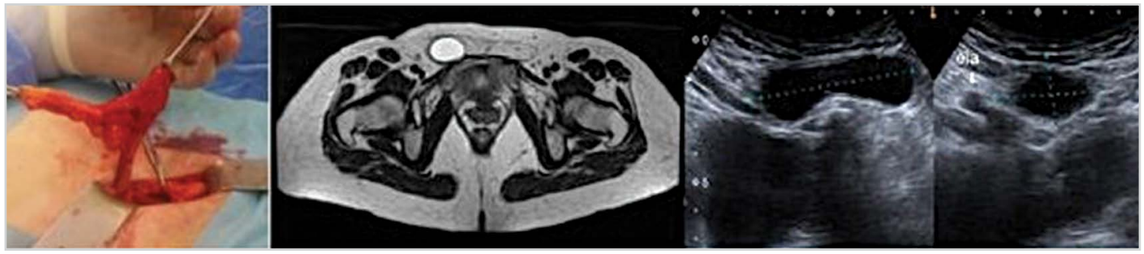

Fig. 2. Intraoperative findings, MRI findings and US findings of second case.

follow-up in patients with a current diagnosis of round ligament cyst without the need for surgical intervention. Surgical excision and hernia repair is inevitable in symptomatic cases or in the case of progressive increase in the size of the cyst.

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