

## Inguinal hernia in a female or something much interesting

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### Abstract

The most common abnormality found in the inguinal region is the hernia: direct or indirect inguinal hernia and femoral hernia. There are many hernia-mimicking lesions. One such rare condition in females is a round ligament cyst.

Here we present a case of 42 year old female, who came with features suggestive of inguinal hernia. The patient was prepared and taken up for inguinal exploration based on the clinical examination findings and ultrasound report. Intraoperative findings revealed a cyst arising from the round ligament, with a concurrent small hernia. Given the findings, the cyst was excised and sent for histopathology followed by hernioplasty. The cyst was later confirmed to be mesothelial cyst arising from the round ligament of uterus.

**Keywords:** Mesothelial cyst, inguinal hernia, round ligament of uterus

### Introduction

The differential diagnosis for an inguinal mass can be divided into five major groups: congenital abnormalities, non-congenital hernias, vascular lesions, infectious or inflammatory processes, and benign or malignant neoplasms. A primary cyst of the groin is rare, which, when it occurs, can very readily be mistaken for an inguinal or femoral hernia. A few case reports describe

mesothelial cyst of the groin associated with the spermatic cord or round ligament <sup>(1,2)</sup>.

Here we present an interesting case of mesothelial cyst of the round ligament.

### Case details

A female of 42 years of age came with complaints of swelling in the right inguinal region for 10 days associated with pain.

On examination, there was a right inguinal swelling of size 6\*4 cm, not reducible. Abdomen was soft and bowel movements were normal.

Ultrasound abdomen showed a well-defined cyst in the right inguinal canal.

The patient was taken up for right inguinal region exploration. On table, a cyst was found to be arising from the round ligament along with a small inguinal hernia. Cyst was excised in toto and sent for histopathology examination and proceeded with Lichtenstein tension free mesh repair.



Fig 1: Intraoperative appearance of mesothelial cyst of round ligament of uterus

Histopathology reports were suggestive of mesothelial cyst arising from the round ligament.

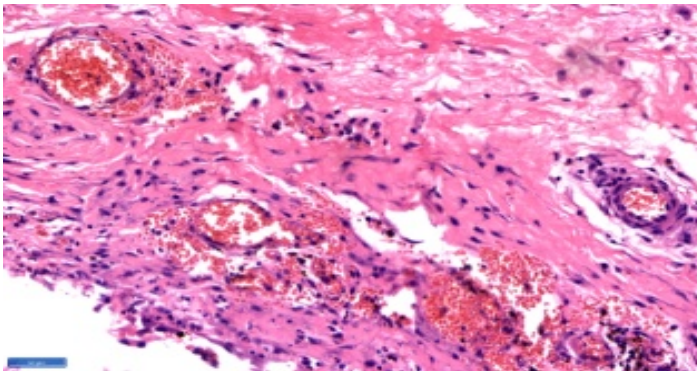


Fig 2: Histopathology showing mesothelial cyst

### Discussion

The round ligament of the uterus, a derivative of the gubernaculum, attaches to the para-mesonephric duct near the utero-tubal junction at 9 weeks of embryonic life. The round ligament extends from the uterus, through the inguinal canal, and ends in the region of the mons pubis and labia majora. Embryologically, this is the female counterpart of gubernaculum testis.

The round ligament cyst is the same as a cyst of Nuck's canal and is the inclusion of embryonic mesenchymal elements or remnants during the development of round ligament.

Mesothelial cysts appear as single or multiple, thin-walled inclusion cysts derived from benign mesothelioma. Such cysts can occur at any abdominal peritoneal surface, such as the round ligament, mesentery, and peritoneum. Uterine mesothelial cysts are rare. There were seven reports

describing 19 patients with mesothelial cysts on the round ligament, 17 of whom were women of reproductive age.<sup>(3)</sup> In 2016 Mehmet Bulent Tirnaksiz, et al, have presented the largest case series of 9 patients with true mesothelial cyst arising from the round ligament<sup>(4)</sup>.

What triggers the growth of mesothelial cysts is unknown, although developmental disorder is generally suspected. A result of the inclusion of embryonic remnants during the development of supporting structures of the female genital tract.<sup>(5)</sup> Past abdominal surgery, pelvic inflammation, or endometriosis may be associated with mesothelial cysts of the round ligament. Some studies have explored a potential relationship between sex hormones and mesothelial cysts, but this remains controversial.<sup>(3,5)</sup> A Case of a percutaneous oocyte retrieval resulting from stimulation of an ectopically situated inguinal ovary has also been reported.<sup>(5-7)</sup>

Mesothelial cysts are usually solitary and benign, and they contain 1 to 3 cavities; the flat mesothelial tissue on the cyst wall is well-differentiated.<sup>(1,8,9)</sup>

Because of its anatomic location and rare occurrence, a round ligament cyst is often misdiagnosed as an inguinal hernia, but it tends to be less symptomatic.<sup>(3,5,8)</sup>

Ultrasonography remains the imaging modality of choice in the assessment of inguinal masses. Ultrasonographic findings of mesothelial cysts of round ligament of the uterus are not characteristic. They have various ultrasonographic features as documented in earlier cases which include oval or fusiform shaped hypo-echoic mass with internal septa, lobulated or loculated cystic mass, a stalk-like structure that connects the mass to the round ligament or inguinal canal, thickened wall, showing no peristalsis.<sup>(7,10-12)</sup>

Surgical intervention is recommended in the presence of symptoms and progressive increases in the size of the cyst. Associated indirect inguinal hernias are found in relation

to round ligament cysts at the time of surgical intervention in 50% of cases, as seen in our case report. <sup>(1,10,13)</sup>

### Conclusion

Differential diagnosis of the inguinal mass or adnexal mass in the female patient should include cysts of the round ligament, even though rare. Ultrasound and CT may be useful in diagnosis but the definitive diagnosis is usually made intraoperatively and confirmed histologically.

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