

Case Report

Inguinal hernia in a female with broad ligament cyst as content

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ABSTRACT

Inguinal hernia in females is relatively uncommon as compared to males. It is interesting to note that 1 male in 5 and 1 female in 50 will eventually develop an inguinal hernia in a lifetime. The hernia sac may contain unusual structures such as the vermiform appendix, acute appendicitis, ovary, fallopian tube and, urinary bladder. Here we present a case of 20-year-old female presented with complaints of swelling in the right inguinal region. Diagnosed as a case of right inguinal hernia with Broad ligament cyst as content. Managed by laparoscopic excision of cyst and then right Lichtenstein repair for inguinal hernia.

Keywords: Inguinal hernia, Female inguinal hernia, Adnexal cyst, Cyst hernia, Broadligament cyst

INTRODUCTION

The incidence of inguinal hernia in females is 1.9%, the ratio of boys to girls being 6:1.¹ The site of presentation is 68.1% on the right side, 23.4% on the left and 8.5% bilateral.²

As such female inguinal hernia is a rare occurrence, the content of the hernia sac may vary widely.

The broad ligament cyst being content in female inguinal hernia has never been reported before. Diagnosis made by clinical examination and radiological examination varies with each other and causes a dilemma in further approach. The procedure done for this case may give an idea for others who encounter such cases.

CASE REPORT

A 20-year-old nulliparous female presented to our hospital with complaints of swelling in the right inguinal region for

the past 2 months. The swelling appears on standing erect and reduces on lying down. The swelling was insidious in onset and progressive in nature. Not associated with pain. No history of fever or trauma. No other significant history. No menstrual disturbances.

On examination a swelling of size 2.5×2.5 cm appears in the medial end of the right inguinal region on standing up. Swelling reduces spontaneously on lying down, Cough impulse present only in standing posture and no swelling appears while lying down.

In standing posture with the deep ring occluded swelling does not appear (Figure 1). With three-finger test, cough impulse felt in the right index finger. Hence clinically it appeared to be right incomplete indirect inguinal hernia without any complication.

High-frequency ultrasonography (USG) of the right inguinal region suggested right adnexal intraperitoneal cyst with extension into right inguinal canal possibly:

round ligament cyst and hydrocele of canal of nuck with the intraperitoneal component.

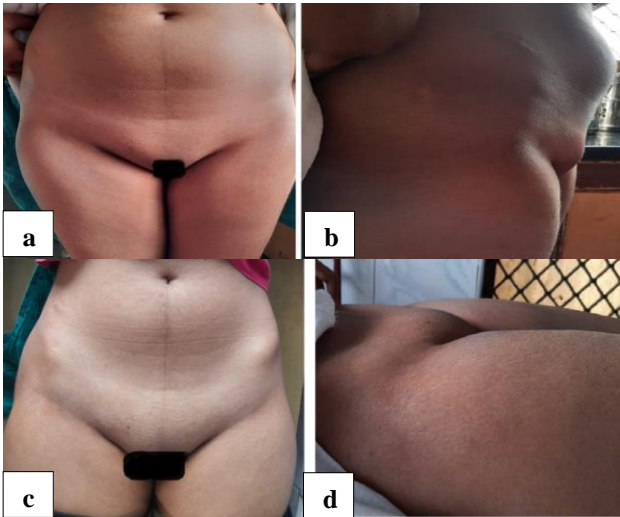


Figure 1: Preoperative images of the patient (a) in standing posture, (b) in supine posture, (c) standing posture lateral view, and (d) supine posture lateral view.

The magnetic resonance imaging (MRI) of the local region which showed right para-ovarian cyst of size 8.4×2×4.2 cm which herniated through right inguinal canal up to external inguinal ring (Figure 2).

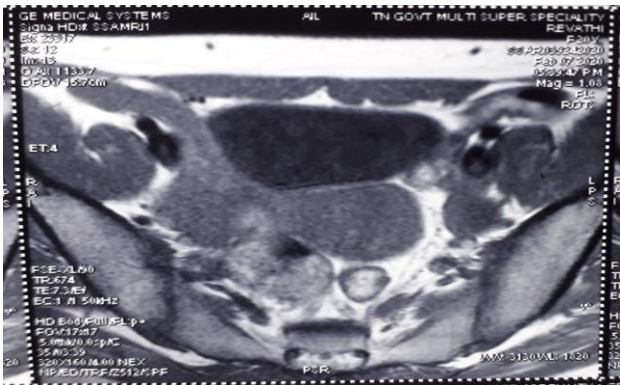


Figure 2: MRI showing herniation through right inguinal canal, possibly adnexal cyst.

Because of the diagnostic dilemma and possibility of a para-ovarian cyst, a diagnostic lap (D-lap) was done. A cyst arising from the right broad ligament of size 4×4 cm was found. Ovaries and the fallopian tubes were found to be normal (Figure 3).

Peritoneum reflected, cyst wall punctured and straw coloured fluid of about 50 ml aspirated and sent for analysis cyst wall excised and sent for histopathological examination.

Then proceeded with right Lichtenstein repair, round ligament separated, an empty sac found which was opened

up and transfixed. Polypropylene mesh placed and fixed (Figure 4).

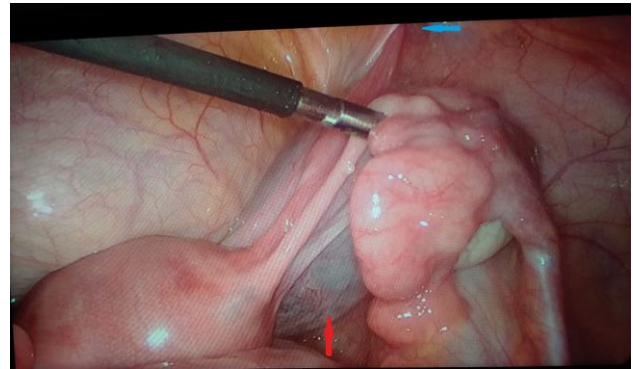


Figure 3: Laparoscopic view showing red arrow-broad ligament cyst, and blue arrow-deep inguinal ring.



Figure 4: Intraoperative image showing blue arrow-hernial sac, and green arrow - round ligament.

The patient recovered well and orals started on the day of surgery.

Fluid analysis report was negative for malignant cells.

Discharged after 2 days. The suture was removed after 10 days, the scar was healthy.

Patient was reviewed after 4 weeks, post-operative USG showed no residual intraperitoneal fluid.

DISCUSSION

Inguinal hernia in females is relatively uncommon as compared to males. To date one of the largest retrospective series on the content of inguinal hernias is by Gurer et al.³ They reported that among 1,950 cases, ovaries and fallopian tubes accounted for 2.9% of the unusual contents of hernia sacs. 0.41% of patients showed a hernia sac containing only the fallopian tube. The incidence of inguinal hernia in pregnancy is 1:1000. The incidence of indirect hernia relates to congenital weakness at the internal abdominal ring. The sac is formed by the unobliterated portion of the prenatal peritoneal

invagination of the canal of Nuck that runs along and partly covers the round ligament. Smoking, appendectomy, abdominal operations and multiple deliveries are not associated with the inguinal hernia in females.⁴ All inguinal hernias in females occur as indirect protrusions. Because of the stress of childbearing, the transversalis fascia is stronger in the floor of the inguinal canal and hence has a protective effect, so direct hernia in females is unusual.⁵

Sliding hernias of the tube, ovaries and, uterus occurs occasionally in newborn female infants but is rare in older women.⁶ When found in a woman of reproductive age, these are commonly associated with defects in genital tract development.⁷ The ligament which runs along an inguinal hernia sac in females is believed to be round ligament of uterus, is actually the suspensory ligament of the ovary and terminates in the hernia sac.⁸ The sac should be opened in a normal appearing portion, and the walls inspected for a sliding component. The mesenteric attachment of the inner sac wall is divided in the bloodless plane within the sac.

CONCLUSION

To conclude prompt surgical repair should be done in all female patients presenting with inguinal hernia. Therefore, in female children the sac must be opened and its contents examined before it is tied off and excised. Young age should not contraindicate repair. Uterine adnexa could be content in young female presenting with groin hernia. Radiological imaging can be done to identify the content and devise a plan for a definitive procedure. Caution should be taken while opening the sac to avoid injury to the content. Laparoscopic approach aids in visualizing the content intraoperatively and early postoperative recovery. As done in this case the cyst has to be excised completely and adnexa has to be preserved.⁹

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