

Obstructed inguinal hernia containing ovary with an ovarian cyst: a case report

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Abstract

A 27-year-old married woman came to the emergency room (ER) with the chief complaint of severe pain in the abdomen for 3 days, which was more pronounced in the right iliac fossa, along with the complaint of multiple episodes of vomiting for the last 6 hours. She also gave a history of swelling in the right inguinal region for last 9 months with the complaint of mild on and off pain in the swelling. On physical examination, diagnosis of obstructed inguinal hernia was made. Ultrasonography (USG) of abdomen was of no use, as it only commented on hernial defect and not on the contents of the hernial sac. An emergency surgery was planned; marsupialisation of ovarian cyst, repositioning of fallopian tube along with ovary and herniorrhaphy was performed without any difficulty.

Keywords: Ovarian hernia, Inguinal Hernia, Sliding hernia, Fertility.

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Introduction

Inguinal hernia is described as bulging of abdominal viscera /peritoneal tissue out of the inguinal canal. Inguinal hernias constitute one of the most common benign surgical disorders and form about 75% of abdominal wall hernias¹. There is an increased frequency of inguinal hernias in men (90%), whereas in women it is 10%; with omentum and small gut mostly present as the content of the hernial sac². A retrograde analysis of 1,950 cases of operable inguinal hernias showed that the vermiform appendix was present in 0.51% of the cases, ovaries and fallopian tubes in 2.9%, and urinary bladder in 0.36%³. The presence of ovary and fallopian tube in a hernial sac is more frequent in the paediatric population as compared to the women of child bearing age, as this presentation is mostly linked with the congenital malformation of the female reproductive system that

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makes this case a unique one and worth reporting it⁴. Patient' consent for publication was taken before submission of the case report.

Case Presentation

A 27-year-old, married female presented in the ER of Mayo Hospital, Lahore, Pakistan, with the primary complaint of pain in the lower abdomen for last 3 days. The pain was predominantly located on the right side- more specifically in the right iliac fossa- along with the complaint of multiple episodes of vomiting in the last 6 hours. According to the patient, she was in her usual state of health till 3 days back, when she started having pain in the lower abdomen which was sudden in onset, colicky in nature and more pronounced in the right iliac fossa. The pain was initially mild in intensity but later became severe, non-shifting, non-radiating with the associated complaint of multiple episodes of vomiting in the last 6 hours, which was not projectile and bilious. She had normal bowel and bladder habits. She had a normal menstrual cycle and her age of menarche was 13 years. Her last menstrual period (LMP) was 10 days ago. She stated that in the past, she had developed a swelling in her right inguinal region 9 months prior, and had a complaint of intermittent mild pain in the swelling for the last 4 months. She also had an uneventful Caesarian section 4 years ago. She was G2P1A0.

On physical examination, she was well oriented with time, place and person, her pulse was 98/min, B.P was 110/60 mmHg, respiratory rate was 17 breaths / min, and she was afebrile at the time of examination. With respect to her abdominal examination, on inspection there was small Pfannenstiel incision scar on her lower abdomen and a swelling of almost 5×3cm in the right inguinal region (Fig.1). On palpation, abdomen was soft, tenderness in the lower abdomen was more apparent in the right iliac fossa, specifically in the area of the swelling. The swelling was about 5×2.5 cm, soft to firm in consistency, tender to touch, irreducible, with no pulsation, but expansile cough impulse was positive. On auscultation, bowel sounds were present, but sluggish. Rest of the abdominal examination, including digital rectal examination, was unremarkable. Result of lab investigations, advised at the time of admission, revealed that the patient had iron



Figure-1: Inguinal swelling and previous C-section scar



Figure-2: Hernial sac containing fallopian tube and ovary

deficiency, as her haemoglobin (Hb) was 8.6 g/dl (12-16 g/dl), MCHC was 27 g/dl (46-55) and MCV was 61 (76-100). Her TLC- $6.0 \times 10^3/\text{UI}$ ($4-11 \times 10^3$), platelet count $110 \times 10^3/\text{UI}$ ($150-450 \times 10^3$) and the rest of her biochemical reports like renal function tests, liver function tests and coagulation profile was normal. Her abdomino-pelvic ultrasonography showed a hernial defect in the anterior abdominal wall and decreased peristaltic activity of gut. Left ovary was visualised, which was normal and seen in the ovarian fossa, but the sonologist did not comment on the right ovary and wrote only that right ovary could not be visualised. Diagnosis of inguinal hernia was made and the patient was operated on an emergency basis. During the surgery, it was seen that an ovary with a 2x2 cm large ovarian cyst and fallopian tube were present as the content of the hernial sac (Fig:2). Marsupialisation of the cyst was done, fallopian tube and ovary were reduced and sac was transfixed. After posterior

abdominal wall plication with Prolene 2-0 suture, herniorrhaphy- specifically Darns repair- was done using Prolene 1 suture. After securing haemostasis, the wound was closed in reverse order. After the surgery, the patient made an uneventful recovery and was discharged on the 2nd day after surgical procedure, on oral antibiotics with the advice of follow up in the OPD. She came for re-checking on the 8th post-operative day, her wound was healthy and there were no complications.

Discussion

According to the literature review, it's a rare event to find an ovary and fallopian tube as contents of an inguinal hernia in females of child-bearing age⁴. On the other hand, documented incidence of gonadal hernias is markedly high in children; occurring at a frequency of 71% in the age group of less than 5 years, but it is 30% in adults or females falling in the child-bearing age⁵. Another theory presented by Fowler, gave the idea that the presence of long suspensory ligaments of ovaries is the main reason for the inguinal hernia containing an ovary⁶. It was hypothesised by Thompson, that because of the non-union of the Mullerian ducts, there is increased movement of the ovaries, thus raising the probability of protrusion of the uterus, fallopian tube and ovary into the inguinal canal⁷. In another study conducted by Yao et al., a suggestion was made that the presence of an ovary in the hernia can be confirmed by performing USG of the bulging area as well as an intra-abdominal scan, with full bladder-the additional inability to locate an ovary in the pelvis will strengthen the diagnosis of ovarian inguinal hernia⁸. Even though the presence of ovaries in an inguinal hernia is not frequently dealt with by surgeons, one should have a high level of suspicion in order to make an apt and timely diagnosis. In 4-37% of female inguinal hernia cases, it was found during surgery, that ovaries were irreducible⁹. Differential diagnoses in females presenting with complaint of swelling in the inguinal region may vary from direct inguinal hernia, abscess formation, reactive lymph nodes to soft tissue tumours (e.g.; sarcoma, leiomyoma or lipoma)¹⁰. Confirmation of diagnosis can be done in no time by ordering an USG scan. Surgery is the treatment of choice, in which contents of hernia are reduced, followed by ligation of the sac. After the sac has been ligated, the deep ring is closed and lastly the posterior wall is strengthened by placing a non-absorbable mesh. In some cases, where mesh is not available, like in our case, the posterior wall is supported by doing herniorrhaphy using Prolene sutures.

Disclaimer: None.

Conflict of Interest: Prof Dr Ameer Afzal who signed the

HOD letter is also one of the authors of this article

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