

A Rare Case of Torsed Ovary within Left Inguinal Hernia in a Patient with Congenital Absence of Uterus

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Abstract

Female inguinal hernias are rare, and ovarian content is also unusual. It is quite uncommon for ovarian torsion to occur inside the hernia sac, particularly in individuals who have congenital uterine absence. We describe a 40-year-old woman who had acute left inguinal discomfort and was known to have uterine agenesis. Ultrasonography revealed a minor hernia defect and a cystic lesion in the canal of Nuck with potential abscess formation. A torsed ovary was found inside an indirect inguinal hernia sac during surgery. Mesh hernioplasty was done after an oophorectomy. Ovarian hemorrhagic infarction was verified by histopathology. This instance emphasises how crucial it is to take adnexal pathology into account when female groin swellings occur, particularly in individuals with Müllerian defects.

INTRODUCTION

Less than 5% of occurrences of inguinal hernias occur in females, making them very uncommon. While the presence of an ovary is uncommon and more common in pediatric populations, the hernia sac typically comprises omentum or colon.

The canal of Nuck, a persistent processus vaginalis in females, can allow herniation of adnexal structures. In rare situations, the ovary may undergo torsion within the hernia sac, leading to vascular compromise and infarction.

Congenital absence of the uterus, most commonly due to **Müllerian agenesis (MRKH syndrome)**, is associated with abnormal positioning of ovaries, which may predispose to ectopic location and herniation.

We report a rare case of torsed ovary within an inguinal hernia in a 40-year-old female with known uterine agenesis.

A. CASE REPORT

A 40-year-old woman presented to the department with complaints of **severe pain in the left groin since morning**. She had a known history of **congenital absence of uterus**, diagnosed at the age of 18 years during evaluation for primary amenorrhea. There was no history of similar complaints in the past. There were no associated symptoms such as vomiting, abdominal distension, or bowel and bladder disturbances. The rest of her medical and surgical history was insignificant.

The patient had stable vitals (pulse 86/min, blood pressure 128/80 mmHg, and respiratory rate 18/min). Clinical examination revealed an **irreducible, tender swelling in the left inguinal region**, which was firm in consistency and showed no cough impulse. The swelling was associated with localized tenderness, and the overlying skin appeared normal.

An ultrasound (USG) scan demonstrated a **well-defined mixed echogenic lesion measuring 46 × 23 mm with internal cystic areas**, minimal surrounding free fluid, and **internal vascularity** in the left inguinal region. A **~12 mm defect** was noted, suggestive of a left inguinal hernia. Based on these findings, a possibility of **cyst in the canal of Nuck with superadded infection (abscess formation)** along with inguinal hernia was considered.

Since the diagnosis of an **irreducible inguinal hernia with suspected complicated content** was made, the patient was planned for emergency surgical exploration.

Intraoperative findings revealed an **indirect inguinal hernia sac containing the left ovary**, which was found to be **torsed, congested** (Fig. 1). The ovary was non-viable; hence, **left oophorectomy** was performed. The hernia sac was ligated, and **Lichtenstein tension-free mesh hernioplasty using polypropylene mesh** was carried out (Fig. 3).

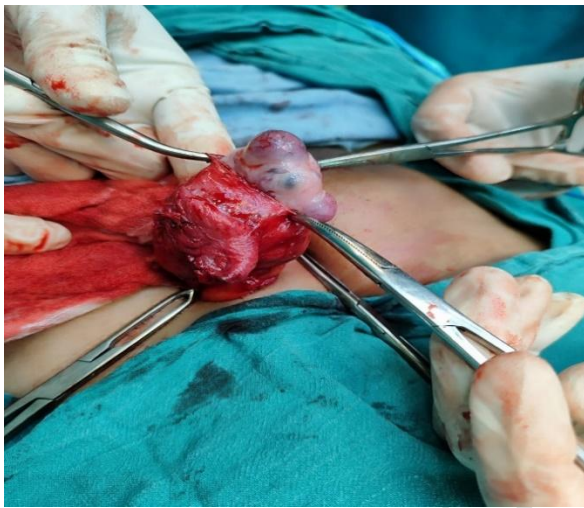


Figure 1 indirect sac containing torsion ovary

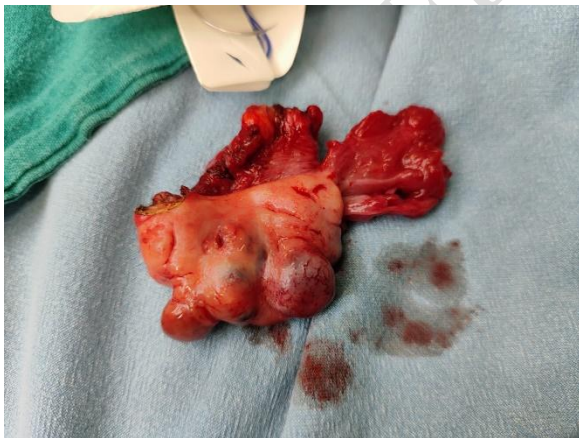


Figure 2 specimen of indirect sac



Figure 3 Polypropylene mesh is placed and

The post-operative period was uneventful, and the patient was discharged on the **5th post-operative day**. The patient remained asymptomatic on follow-up with no evidence of recurrence.

Histopathological examination (HPE) of the excised specimen revealed **hemorrhagic infarction with congestion and necrosis of ovarian tissue**, confirming the diagnosis of **ovarian torsion with infarction**.

B. DISCUSSION

Less than 5% of women have inguinal hernias. Not only in this case; in all cases of hernia; the patient must be promptly evaluated to assess the nature of hernia (reducibility/irreducibility) as irreducible hernias have a higher risk of developing complications such as strangulation and incarceration. In most cases, an inguinal hernia can be diagnosed based solely on a history and physical examination.

Inguinal hernias can manifest as a subacute or acute condition with mild to severe abdominal-pelvic pain, or as an asymptomatic finding like a painless bulge in the groin.. A differential diagnosis of abdominal wall hernia must be considered in an adult woman presenting with acute groin pain. Such hernias may frequently be overlooked, particularly if not carefully evaluated on physical examination.

Hernias may contain a variety of visceral organs, most commonly intestine or omentum, which may lead to incarceration or strangulation requiring emergency intervention. Additionally, the fallopian tube or ovary may become trapped.although this is rarely considered. Patients may present with vague symptoms such as heaviness or dull discomfort in the groin, which may worsen with increased intra-abdominal pressure.

Typically, hernias can be diagnosed by careful palpation on clinical examination and confirmed by ultrasonography (USG). On USG, hernias containing ovary may appear as solid masses or solid lesions with cystic areas. However, when imaging findings are inconclusive, as in the present case where a canal of Nuck cyst with superadded infection was suspected, further imaging such as computed tomography may aid in diagnosis and surgical planning.

In adult women, indirect inguinal hernias are more common than direct hernias and typically occur between 40–60 years of age [3]. Most of these hernias contain intestinal contents, and only rarely involve female adnexa such as ovary or fallopian tube, accounting for approximately 3% of cases [5]. Entrapment of female adnexa is more commonly seen in infants due to anatomical factors such as a short inguinal canal and persistence of the canal of Nuck [5-8].

The occurrence of adnexal structures within an inguinal hernia in adult women, as seen in this patient, is therefore uncommon. In addition, this patient had a history of **congenital absence of uterus (likely Müllerian agenesis)**, which may predispose to abnormal ovarian mobility and ectopic positioning, thereby increasing the risk of herniation into the inguinal canal.

Timely management is essential to prevent complications such as ovarian torsion and infarction. In cases where adnexal structures are involved, a significant proportion may require oophorectomy due to compromised vascularity [5]. In the present case, the ovary was found to be torsed and gangrenous intraoperatively, necessitating oophorectomy. Histopathological examination further confirmed hemorrhagic infarction consistent with torsion.

Thus, female adnexa are particularly vulnerable when entrapped within an inguinal hernia, and failure to recognize this condition may lead to irreversible damage. Early diagnosis and prompt surgical intervention are therefore crucial.

In summary, we describe a rare case of **torsed ovary within an indirect inguinal hernia in a premenopausal woman with uterine agenesis**. Most such cases present as a painful groin swelling and are diagnosed intraoperatively, as observed in this patient.

CONCLUSION

The diagnosis of entrapped adnexal structures within an inguinal hernia should be considered in adult females presenting with painful groin swelling. The presence of associated congenital anomalies such as uterine agenesis may further predispose to abnormal ovarian location and herniation. Early recognition and prompt surgical intervention are essential to prevent complications such as torsion, infarction, and loss of ovarian function. In cases where the ovary is non-viable, oophorectomy remains the definitive management along with appropriate hernia repair.

LEARNING IMPLICATIONS

- Inguinal hernia in females is uncommon, and the presence of ovary as content is rare.
- Painful irreducible groin swelling in women should raise suspicion of adnexal involvement.
- Müllerian anomalies such as uterine agenesis may predispose to ectopic ovarian location.
- Imaging may be misleading and can mimic canal of Nuck cyst or abscess.
- Early surgical exploration is crucial to prevent ovarian torsion and infarction.
- Oophorectomy is indicated when the ovary is non-viable, followed by definitive hernia repair.

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