

Case

# **Surprising Consequences of Tubal Ligation: A Rare Case of Inguinal Hernia**



**ABSTRACT :**

**INTRODUCTION:** A chance of having a female reproductive organ in an inguinal hernia presentation is a rare occurrence. Patients may present with vague symptoms like localized pain in the inguinal canal, and swelling can also be visualized. Ovary and fallopian tube can be detected incidentally during elective surgery or they can present as a medical emergency requiring immediate intervention for prevention of ovarian torsion. The same can be found after tubal ligation, but these are very rare phenomena.

**CASE PRESENTATION:** A 37-year-old female patient presented with complaint of left-sided lower abdominal pain for 6 months, which was insidious in onset, gradually increase in intensity over the last 3 days before the presentation, which was dull aching, not relieved with medications, aggravated during the time of menstruation cycle. She had undergone single incision laparoscopic tubal ligation 5 years ago. On examination the significant finding was tenderness and swelling at the level of deep inguinal ring. On per operative exploration, inguinal hernia was found to contain ovary with fallopian tube. The content was reduced back into the pelvic cavity and meshplasty was performed.

**CONCLUSION:** While inguinal hernias are common, the unexpected presence of fallopian tubes and ovaries within them presents a rare, but crucial diagnostic challenge for medical professionals. A sharp eye and consideration of this possibility, especially in female patients, are essential for prompt and effective surgical intervention, ultimately preventing serious complications.

*Keywords: [ Ovarian hernia, Tubal ligation, Inguinal hernia ]*

**1. INTRODUCTION:**

Inguinal hernias containing female reproductive organs, particularly the ovary and fallopian tube, present a rare but significant clinical entity.

The prevalence varies across age groups. Ovarian inguinal hernias are most commonly seen in infants and young children. In adults, ovarian inguinal hernias are rare. They are more likely to occur in women of reproductive age, but they are extremely rare in postmenopausal women. [1-3].

Risk factors in adults include obesity, previous pelvic surgery, pregnancy, and conditions that increase intra-abdominal pressure.[4]

Tubal ligation, a common permanent contraception method, involves the occlusion of both fallopian tubes. In single-incision laparoscopic tubal ligation, also known as single-port access (SPA), both tubes are accessed and ligated through a single small incision, typically near the umbilicus. While generally safe, this procedure may rarely lead to complications, including ovarian herniation.[5]

The incidence of ovarian hernia as a complication of tubal ligation is not well documented due to its rarity. However, case reports suggest it can occur months to years post-procedure. Healthcare providers should maintain awareness of this possibility when evaluating women with a history of tubal ligation who present with inguinal symptoms.

These cases often present with vague symptoms such as localized pain in the inguinal region or swelling, which may be exacerbated during menstruation. The diagnosis is frequently incidental, occurring during elective surgical procedures. Yet in some instances, it can manifest as an urgent surgical emergency.<sup>[6-10]</sup>

Recognizing and understanding this rare phenomenon is crucial for timely diagnosis and appropriate management, helping to avert potential complications and optimize patient outcomes.

## CASE PRESENTATION:

A 37-year-old female patient presented with a complaint of left-sided lower abdominal pain for 6 months, which had increased over the last 3 days. The pain was dull and aching, not relieved by medications, and aggravated during the menstrual cycle.

The patient also reported experiencing constipation. No other significant complaints were noted.

She had undergone single-incision laparoscopic tubal ligation 5 years ago. Following the operation, she had no complaints until 6 months ago.

She has three children, all delivered by normal vaginal delivery. Her menstrual cycles were regular. She had no other significant past, personal, or family history.

### 1.1 Clinical Findings:

On clinical examination, the skin of the abdomen was normal. Finger-point tenderness was present over the left inguinal region, with palpation revealing a swelling measuring 2 cm × 2 cm, which had a smooth surface with ill-defined margins at the deep inguinal ring. The swelling did not increase in size with cough impulse and was irreducible when supine or with manual attempts. Bowel sounds were present, and no organomegaly was detected. An old healed scar measuring 1 cm × 0.5 cm was horizontally placed just inferior to the umbilicus, likely representing a previous tubal ligation scar.

Her cardiovascular, respiratory, and central nervous system examinations

were normal.

Her per vaginal examination was normal. The per rectal examination revealed normal anal tone with a healed anal fissure and a skin tag at the 6 o'clock position.

### 1.2 Blood Investigation:

On blood investigation, Hb was 13 and wbc count was 9000 and platelet count was normal. No abnormalities in renal and liver function test.

### 1.3 X-ray abdomen standing:

X-ray chest and abdomen were normal.

### 1.4 Usg Abdomen and Pelvis:

On ultrasonic finding of abdomen and pelvis reveals defect of 2 cm size in left inguinal region containing ovary with normal vascularity.

### 1.5 Management:

The patient underwent open left inguinal hernia repair. An incision measuring approximately 5 cm × 1 cm was made 1.5 cm above the midpoint of the inguinal ligament to the pubic tubercle.

The subcutaneous tissue was cut, and the external oblique aponeurosis was opened. An ovary with fallopian tube was found within the hernial sac and was healthy.

It was reduced back into the pelvic cavity

and placed into the ovarian fossa. Hernial repair was performed using a proline mesh measuring 6 cm × 11 cm. The external oblique aponeurosis was closed, and the skin was closed. The patient was discharged without any complications in the postoperative period of 1 week, and the sutures were removed on postoperative day 14.



Fig 1: Left ovary with Fallopian tube as content of left inguinal hernia

## 2. DISCUSSION :

Our case report highlights the importance of considering the possibility of ovarian hernia in female patients presenting with inguinal hernias, particularly those with a history of tubal ligation, as the ovary has a tendency to torsion. [11]

The anatomical changes induced by tubal ligation may predispose women to atypical presentations of inguinal hernias. The ovary and fallopian tube can herniate through the inguinal canal, leading to symptoms such as localized pain and swelling.

The diagnosis of an inguinal hernia containing the ovary and fallopian tube

can be challenging. Imaging studies such as ultrasound and X-rays may not always reveal the presence of these organs within the hernia.

In Patel et al. (2020) and Kim et al. (2019), patients presented after 3 months and 2 weeks, respectively, of tubal ligation with a pelvic lump, pain, and vomiting. Laparoscopic management was performed, involving suspension of the ovary to the pelvic sidewall and placement of hernial mesh, with no complications following the procedure.[6,7,9,10]

In Sharma et al. (2018), a patient presented after 6 months of tubal ligation with a pelvic lump and pain. Open repair was done by reducing the herniated ovary, followed by open ovarian suspension to the pelvic sidewall and meshplasty, also without complications. [8]

Both open and laparoscopic approaches can be used for ovarian hernial repair, and both have good outcomes; the choice of surgical management depends on the operating surgeon.

## 3. CONCLUSION

While inguinal hernias are common, the unexpected presence of fallopian tubes and ovaries within them presents a rare but crucial diagnostic challenge for medical professionals.

A sharp eye and consideration of this possibility, especially in female patients, are essential for prompt and effective surgical intervention, ultimately preventing serious complications.[11,12]

Our case report adds to the existing literature on this topic and emphasizes the importance of considering this possibility in

female patients presenting with inguinal hernias and managing it in a timely manner.

## CONSENT

Consent has been taken from the patient.

## ETHICAL APPROVAL

As per the international standard or university standard written ethical approval has been collected and preserved by author(s).

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