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Case Report

Asymptomatic Torsion of an Ovarian Dermoid Cyst in an Unmarried Woman: A Rare Clinical Entity

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Abstract

Introduction: Ovarian torsion is a gynecological emergency that is typically characterised by acute pelvic discomfort. Nevertheless, the torsion of a mature cystic teratoma (ovarian dermoid cyst) can occasionally be asymptomatic, resulting in an incidental diagnosis. This report emphasises the diagnostic challenges and clinical implications of a rare case of asymptomatic ovarian dermoid cyst torsion in an unmarried woman.

Case Presentation: After a routine pelvic ultrasound, a 10 cm right ovarian mass with characteristics indicative of a mature cystic teratoma (dermoid cyst) was discovered in a 32-year-old unmarried woman. The woman was evaluated for unrelated gynecological concerns. An ovarian cystectomy was done followed by detorsion due to the mature cystic teratoma, which was confirmed by histopathology report. The patient's recuperation was uneventful, and fertility-preserving counseling was administered.

Conclusion: The incidental diagnosis of asymptomatic ovarian torsion presents a clinical dilemma, as it is exceedingly uncommon. This case emphasizes the necessity of timely surgical intervention to prevent complications, including necrosis, and emphasizes the significance of routine imaging in patients with adnexal masses. Young women, particularly those who are considering future fertility, should contemplate elective removal of dermoid cysts.

Keywords: *Ovarian Torsion; Dermoid Cyst; Asymptomatic Torsion; Unmarried Woman; Fertility Preservation*

Introduction

Dermoid cysts, which are also referred to as benign mature cystic teratomas, are a form of germ cell tumour. that can result in substantial complications, such as adnexal torsion. These cysts are generated from totipotent germ cells and may contain a variety of tissues, including hair, epidermis, and glands. While they are generally slow-growing, they may occasionally manifest rapid growth, particularly during a woman's reproductive years, as a result of hormonal influences [1,2].

Adnexal torsion is a condition in which the ovary or fallopian tube coils around the supporting ligaments, resulting in a reduction in blood flow. Dermoid cysts are acknowledged as one of the most prevalent causes of this condition. In comparison to those who do not experience torsion, patients who experience torsion are more likely to experience acute abdominal pain and other symptoms, including vertigo and vomiting.

The clinical presentation of dermoid cyst torsion frequently includes sudden onset abdominal discomfort, and it is more frequently diagnosed in younger women. In order to prevent additional complications, such as necrosis of the afflicted ovary, surgical intervention is

typically necessary. It is essential to comprehend the characteristics and hazards associated with dermoid cysts in order to provide timely diagnosis and management, thereby reducing the likelihood of torsion-related emergencies [3].

Ten to twenty percent of all ovarian tumors are caused by ovarian dermoid cysts, also known as mature cystic teratomas, which carry a notable risk of complications including torsion (15 - 20%). Dermoid cyst torsion is the twisting of an ovarian dermoid cyst (also known as a mature cystic teratoma), which causes limited blood flow and possible ovarian damage. This surgical emergency is typified by sudden, severe abdominal pain, although in rare cases it may occur without symptoms. This is a gynecological emergency calling for quick medical intervention.

Risk factors:

- Greater risk results from large cyst size (> 5 cm).
- Common in women in their reproductive years, more movement of the ovary [4,6].
- Pregnancy: Hormonal changes could help.
- Quick motions (physical activity or exercise).

Signs and symptoms:

- Extreme, abrupt pelvic pain (usually unilateral).
- Vining and nausea and vomiting.
- Fever (should prolonged ischemia take place).
- Guarding and tenderness of the abdomen.
- Pain that might come and go-intermittent torsion.

Extended torsion handled incorrectly might cause ovarian necrosis, which calls for the removal of ovaries In a dermoid cyst torsion results from the cyst twisting the ovary around its supporting ligaments, therefore compromising blood supply.

Many elements influence this: One could say: Enhanced ovarian mobility, especially in young women or during pregnancy, the ovary is not firmly attached and thus prone to twisting. Torsion is often unilateral, dermoid cysts throw off weight distribution and second torsion could be due to significant size cysts > 5 cm raise the risk since they change the center of gravity of the ovary, therefore facilitating twisting. The torsion risk is largest in moderate-sized cysts (5-10 cm; very large cysts may be too heavy to rotate fully). Intra-abdominal pressure changes torsion can be brought on by abrupt motions like trauma, exercise, or sexual activity changes in the pelvis associated with pregnancy could potentially raise the probability [5].

Cyst composition unlike other ovarian cysts, dermoid cysts are lighter and more buoyant because they include fat, hair, teeth, and other tissue. This raises their twisting inclination. Retorsion and torsion in partials.

The ovary may twist and untwist sporadically, causing on-and-off pain until full torsion develops, resulting in severe, constant agony and necrosis should treatment be neglected.

Torsion of dermoid cyst diagnosis and management

Identification: Preventing ovarian necrosis depends on early identification.

1. Clinician presentation:

- Often unilateral, severe, sudden-onset pelvic discomfort.
- Nausea and vomiting brought on by peritoneal irritation.
- If torsion is partial, pain could be sporadic.
- Fever and leukocytosis, should necrosis develop.

2. Examination of the pelvis:

- The lower abdomen's tenderness.
- Potential adnexal mass.

3. Imaging tests:

- First-line test, pelvic ultrasonic scan:
- Shows a complicated cystic mass with echogenic regions (from hair and fat in dermoid cysts).
- Doppler ultrasounds may show either absent or decreased blood flow; normal flow does not exclude torsion.
- CT or MRI (should more study be required): Verifies cyst makeup (fat, calcifications, hair).
- Shows "twisted pedicle sign," (whirl-like look of twisted ovarian arteries).

Prevention of ovarian damage always depends on surgical intervention:

1. Preferably for stable patients, laparoscopy:

- If the ovary seems viable, determine its detorsion-that is, twisting.
- Ovarian cystectomy-removal of the dermoid cyst with preservation of ovarian tissue.

2. For unstable patients or significant necrotic tumors, laparotomy:

- Applied for ovarian infarction, rupture, or big cysts.
- Oophorectomy-ovary removal-is carried out should the ovary be nonviable.

3. Care following surgery:

- Complications' monitoring and pain control.
- Follow-up ultrasounds looking for recurrence.

This case report presents an incidentally diagnosed, asymptomatic torsion of a dermoid cyst in an unmarried woman, emphasizing the role of early detection and appropriate management.

Case Report

26-year-old unmarried girl with a known case of dermoid cyst was admitted for dermoid cyst removal laparoscopically. She doesn't have complaints of severe abdominal pain or dysmenorrhea; there were no complaints of nausea and vomiting. Her menstrual cycles were regular with no history of menorrhagia.

She doesn't have any significant medical or surgical history.

On clinical examination:

- Normal vitals; afebrile general condition.
- Examining the abdomen: soft, non-tender, not palpably mass.

Trans-abdominal pelvic ultrasonic exam:

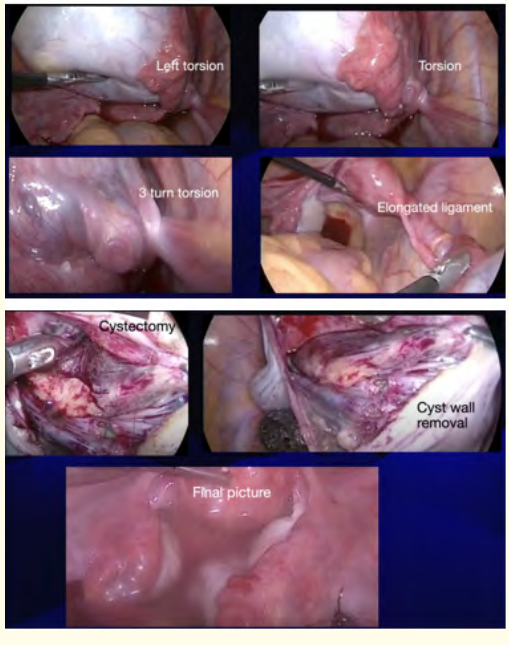
- An 83 x 75 mm heterogeneous right ovarian mass indicative of a dermoid cyst with areas of echogenicity and shadowing. Not any peritoneal or free fluid indications of rupture.

Surgical notes and management

The patient had laparoscopic ovarian cystectomy with intraoperative results of:

- The right ovary has complete torsion-3 turns rotation.
- A well-encapsulated, non-ruptured dermoid cyst.
- Right dermoid cystectomy done.
- Specimen removed.
- Hemostasis maintained.
- Port removed.
- Skin closed dressing given.
- Patient withstood operation well.

Intraoperative images



Figure

A right ovarian cystectomy was done. Normal was the contralateral ovary.

The histopathology report confirms mature cystic teratoma; no rupture or cancer was found.

Discussion

The example of asymptomatic ovarian dermoid cyst torsion in an unmarried lady emphasizes the need for regular imaging in patients having adnexal tumours. In order to avoid torsion-related problems in big dermoid cysts, surgeons should have low thresholds for their intervention. Young women having oophorectomy should give fertility counselling first priority.

Rare but yet capable of causing ovarian necrosis is asymptomatic torsion.

Routine imaging can find torsion before more severe symptoms start.

Early elective surgery for dermoid cysts more than 5 cm can help to avoid emergency problems [6].

Conclusion

The incidental diagnosis of asymptomatic ovarian torsion presents a clinical dilemma, as it is exceedingly uncommon. This case emphasizes the necessity of timely surgical intervention to prevent complications, including necrosis, and emphasizes the significance of routine imaging in patients with adnexal masses. Young women, particularly those who are considering future fertility, should contemplate elective removal of dermoid cysts.

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