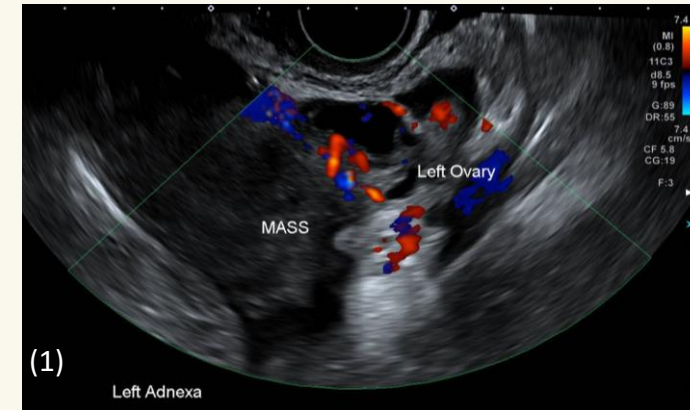


# Spontaneous rupture of ovarian dermoid cyst following sexual intercourse and subsequent intra-abdominal chemical peritonitis - a case report

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## Introduction

- Dermoid ovarian cysts (aka ‘mature cystic teratomas’) are benign ovarian germ cell tumours composed of mature differentiated tissues including skin, hair, sebum, fat, and bone<sup>1</sup>.
- These tumours are slow-growing and usually asymptomatic and therefore often diagnosed as an incidental finding on imaging.
- Spontaneous rupture of ovarian dermoid cysts is rare (0.3-2%) as they are usually thick-walled<sup>2</sup>.
- Causes of spontaneous rupture include pregnancy and labour, torsion, malignant transformation, motor vehicle accidents, or idiopathic causes.
- If ruptured, these cysts may cause acute or chronic chemical peritonitis which can lead to shock or formation of dense adhesions and chronic pain<sup>3</sup>.



## Images

- (1) Pelvic ultrasound demonstrating left ovarian teratoma
- (2) Intraoperative photos showing ruptured ovarian dermoid cyst containing hair
- (3,4) Sebaceous fluid in peritoneal cavity

## Case Description

- 30yo female, otherwise healthy.
- Presented to local hospital with sudden onset abdominal pain following anal sexual intercourse. Required high-dose opioid analgesia.
- O/E: haemodynamically stable, diffusely tender, distended abdomen and signs of peritonitis.
- CT arranged to exclude suspected rectal perforation: 9cm mass in the anterior pelvis in keeping with dermoid cyst. Fluid and fat in the pelvis consistent with likely rupture.
- Pelvis USS: left ovarian teratoma 81x65x66mm with significant free fluid in the abdomen.
- Treated with IV antibiotics and transferred to a tertiary centre for urgent laparoscopic cystectomy and intraperitoneal washout.
- Intraoperative findings: 10cm dermoid cyst arising from the left ovary containing hair, calcified lesions, and sebum. It had ruptured spilling sebaceous fluid into the peritoneal cavity.
- Histopathology confirmed mature cystic teratoma (dermoid cyst).
- Patient made a good recovery and was discharged home on day 2.



## Discussion

Spontaneous rupture of ovarian dermoid cysts is rare. This case is the first, to our knowledge, that reports on rupture with sexual intercourse. The case also demonstrates the importance of prompt surgical management following ovarian dermoid cyst rupture to treat chemical peritonitis and prevent formation of adhesions and chronic pain.

1. Gershenson, D. Ovarian germ cell tumors: Pathology, epidemiology, clinical manifestations, and diagnosis. 2022

2. Bužinskienė, D, et al. (2019). Chemical peritonitis resulting from spontaneous rupture of a mature ovarian cystic teratoma: a case report. Acta Medica Lituanica, 26(217).

3. Li, R., Nikam, Y., and Kapurubandara, S. (2020). Spontaneously Ruptured Dermoid Cysts and Their Potential Complications: A Review of the Literature with a Case Report. Case Reports in Obstetrics and Gynecology, 2020.