

A Rare Case of Spontaneously Ruptured Large Dermoid Cyst Diagnosed Intra-operatively

BACKGROUND:

Dermoid cysts (DC), also known as Mature Cystic Teratomas, are slow growing benign ovarian tumours containing elements from all 3 germ cell lines such as teeth, hair, skin, fat, muscle, and bone. They are usually asymptomatic but spontaneous rupture, which causes severe abdominal pain, can occur in about 1-2% cases.

CASE REPORT:

A 37-year-old nulligravida, with no significant medical history, presented to the emergency department with a one-day history of sudden onset sharp pain in left lower abdomen and suprapubic region, radiating to epigastrium. She denied any associated fever, vomiting, bowel or bladder symptoms. She had regular cycles and was on day one of her periods. Physical examination revealed normal vital signs, a 34-week-size abdominopelvic mass, generalized abdominal tenderness and guarding. On pelvic examination, there was right adnexal fullness, and the uterus was felt to be separate from the mass. An abdominopelvic ultrasound showed a 21x9x20cm echogenic mass in the pelvis extending to the abdomen, probably arising from the right ovary. Laboratory investigations revealed elevated white cell count ($13.1 \times 10^9 / L$), neutrophils ($12.35 \times 10^9 / L$) and CRP (42.6 mg/L). Tumour markers were done which showed elevated CA-199 (1,115 kunits/L) and CA125 (43.1 kunits/L). A contrast enhanced computed tomography (CT) scan of Abdomen- Pelvis showed a mixed density 19x8x22cm abdominopelvic mass with fatty components, consistent with possible large dermoid cyst. There was no sign of rupture on the CT scan. As the patient was experiencing severe pain, she underwent emergency surgery.

RESULTS:

On laparoscopy, a ruptured 30cm right ovarian DC with a 15cm solid component was noted. Minimal salvageable ovarian tissue was found and copious thick tan fluid, and hair was seen dispersed within the abdominal cavity and pelvis. Surgery was converted to laparotomy, right oophorectomy and extensive peritoneal washout with warm saline was done. Post operative recovery was uncomplicated and she was discharged home on day 2 post-surgery. Histopathology confirmed the diagnosis of Mature Cystic Teratoma. She was followed-up 6 weeks post-surgery and recovered well from the procedure.



Figure 4 and 5 : Ruptured DC with cyst contents intra-abdominally and in pelvis

Figure 6: Excised surgical specimen of DC and right ovary



Figure 1: Ultrasound finding of 21cm mass

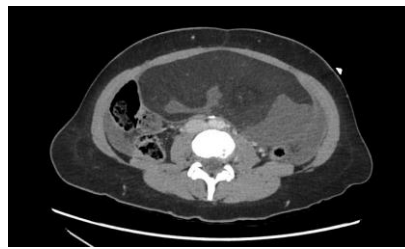


Figure 2: CTAP axial view of cyst



Figure 3: CTAP coronal view of cyst

DISCUSSION:

Dermoid cysts are the most common benign ovarian neoplasms characterized by slow and insidious growth pattern. Owing to their thick capsule, spontaneous rupture of the cyst is quite rare. The size of the cyst is a major factor leading to idiopathic rupture. As seen in this case, there may be an elevated CA-199 level and it can be difficult to detect a ruptured dermoid cyst via imaging, particularly at the time of rupture. Surgery either laparoscopically or by laparotomy is the mainstay of management and meticulous peritoneal lavage is essential to prevent chemical peritonitis from spilled contents.

REFERENCES:

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