Spontaneous rupture of ovarian dermoid cyst associated with intra-abdominal abscess

The patient, a nullipara, presented with a 1-week history of right pelvic pain, with nausea and vomiting of recent onset. There was no history of trauma. A sonogram revealed a right-sided intra-abdominal cystic lesion, ascites and an echogenic, poorly-penetrated, right adnexal mass. A CT scan was performed for further evaluation.

Discussion:

Benign cystic ovarian teratomas (dermoids) are generally said to comprise between 10% and 25% of all ovarian neoplasms. They occur in young women and are bilateral in 25% of patients. Cystic teratomas consist of well-differentiated derivatives of all three germ cell layers. The main complications of benign cystic teratoma are torsion (16%), malignant degeneration (2%), rupture (1-2%), and infection (1%). Spontaneous rupture of an ovarian dermoid cyst is a rare occurrence because of the usually thick capsule present. In addition to intraperitoneal rupture, the dermoid cyst may perforate into an adjacent organ. Although the latter occurs less frequently, numerous reports document spontaneous rupture of ovarian dermoid cysts into the bladder, small bowel, rectum, sigmoid colon and vagina.

Two clinical presentations are associated with the intraperitoneal rupture of benign cystic teratomas. The first is acute peritonitis caused by sudden rupture of tumor contents, which may occur spontaneously or more commonly in association with torsion, trauma, infection, or labour. The second presentation is chronic granulomatous peritonitis resulting from a chronically leaking dermoid, which can be characterised by multiple small white peritoneal implants and dense adhesions, and variable ascites that simulate carcinomatosis or tuberculosis peritonitis.

In this case, a CT scan revealed a 5cm x 5cm x 6cm right adnexal mass of fat attenuation with some air bubbles inside the lesion. Calcification was not detected. Additionally, there was a right-sided large intra-abdominal abscess which compressed adjacent small bowel loops. There was also fluid collection in bilateral paracolic gutters and between the mesenteric leaflets.

Differential Diagnosis List: Ruptured dermoid cyst with intra-abdominal abscess formation

References:
Fibus TF.
Intraperitoneal rupture of a benign cystic ovarian teratoma: findings at CT and MR imaging.
Pal DK, Kundu AK, Das S.
Spontaneous rupture of benign cystic teratoma.
Bhatla N, Khanna R, Bhargava VL.
Intraperitoneal rupture of benign cystic teratoma.
Description: Upright radiograph of the abdomen shows some air-fluid levels mainly in the left upper abdomen. Origin:
Description: CT shows interloop abscess formation and left paracolic fluid collection that is walled off. Origin:
Description: CT shows air-fluid level in the abscess, which compresses adjacent bowel loops, and fluid collection between the mesenteric leaflets. Origin:
Description: CT shows the relationship between an abscess and right adnexal mass of fat attenuation. Origin:
Description: CT shows air bubbles in the dermoid tumour. Origin: