A Rare Presentation of Spontaneous Intraperitoneal Rupture of Dermoid Cyst Presenting as Acute Gynecological Emergency: A Case Report

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Abstract

Spontaneous rupture of dermoid cyst (mature cystic teratoma) leading to acute abdomen is a rare event. Urgent surgical intervention is required after confirmation of the diagnosis in order to prevent prolonged chemical peritonitis and its related complications. A young female who had presented with acute abdomen due to ruptured dermoid is reported.

Key words: Dermoid cyst, Peritonitis, Rupture, Pouch of douglas, Acute abdomen

Introduction

Dermoid cyst is a frequently encountered benign ovarian tumor with reported incidence of 10-25% [1]. They are slow growing, more common in reproductive age group and notorious because of their variable clinical presentation. They are generally symptomless but may complicate leading to dreadful upshots if not treated adequately [2,3].

The most common complication of mature cystic teratoma is torsion (15%) [4] but rupture can occur in 0.3-2% of cases [5]. Torsion with infarction, direct trauma or prolonged pressure from pregnancy or delivery are the proposed inciting events leading to dermoid rupture as spontaneous breach in cyst wall is extremely rare because of its thick nature. Acute and chronic peritonitis are the two clinical presentations associated with intraperitoneal rupture of dermoid cyst [6-8]. Sudden rupture of the tumor contents in abdomen cause acute peritonitis and usually have favorable outcome after immediate laparotomy followed by thorough lavage with oophrectomy of the involved ovary. Chronic granulomatous peritonitis is the result of slow leak from dermoid wall and may mimic peritoneal carcinomatosis or tubercular peritonitis because of the characteristic small white peritoneal implants, dense adhesions and variable ascites [9]. This type of peritonitis is more common and poses management difficulties due to subsequent adhesions and its sequel.

Case Report

A 26 year old multigravida lady was referred to our institute with complaint of pain abdomen and vomiting for past 8 days. There was history of 6 weeks amenorrhea 2 months prior to this episode whereby surgical MTP was done and she resumed her periods after 4 weeks. On systemic examination she was found to be anemic and febrile. Abdominal examination revealed distension with guarding and rigidity and normal sized uterus with 8x6 cm tender mass was felt in pouch of douglas during pelvic examination. Ultrasound done in our own department showed normal sizes uterus with 8x8 cm adnexal mass just posterior to uterus with low level echoes with septated collection in bilateral paracolic spaces and POD. A provisional diagnosis of pelvic abscess was made and supported management started. Patient was further subjected to CECT abdomen and pelvis which reported a well defined 9x9x8 cm heterogeneous lesion in left hemipelvis with presence of fatty attenuation areas, fat fluid level and eccentric calcified soft tissue nodule. Ascites with multiple fat implants and peritoneal enhancement was suggestive of ruptured dermoid with chemical peritonitis.

An explorative laparotomy was undertaken. Abdominal cavity was full of pus and cheesy material. Pelvis was sealed off and there was left sided ruptured ovarian cyst of 8x9 cm adherent to gut loops and lateral pelvic walls. Hair tuft was present inside the cyst confirming diagnosis of dermoid .left salpingoophrectomy and thorough lavage was done and patient recovered well in post-operative period. Histopathological examination confirmed mature cystic teratoma.

Discussion

An accurate diagnosis of rupture ovarian dermoid requires high index of suspicion, proper methodical approach and more aggressive use of imaging modalities. In early period of rupture symptoms and signs may simulate dyspepsia or gastroenteritis features. The presence of ascites and discontinuity of the cyst wall on sonography, CT or MRI is suggestive of rupture [11]. Computerized tomography is fairly straightforward because this is 98% sensitive and 100% specific in diagnosing dermoid as this modality can detect fat attenuation within a cyst with or without calcification in the wall as in our index case [1,10].

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Dermoid rarely may perforate into adjacent bladder, bowel and vagina in addition to intraperitoneal rupture. Nader et al [11] recently reported delivery induced rupture of dermoid following vaginal delivery. Immediate surgical intervention remains the cornerstone of successful management however operative management of chronic granulomatous peritonitis may be complex and challenging as there is limited data available in published literature. Systemic corticosteroid and immunosuppressive agent may improve postoperative recovery in these cases.

Recollection of dermoid cyst kindred with glial seedling and comprehensive perception of the images and of the adverse events of ovarian teratoma are paramount to prevent misdiagnosis, to avoid extensive surgery, and to achieve satisfactory outcome (Figure 1-3).
References


