

A rare cause of acute abdomen: Ovarian torsion due to dermoid cyst

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Abstract

Dermoid cysts are one of the most common causes of ovarian torsion. The causes of acute abdominal pain are mostly caused by the diagnosis of acute appendicitis, acute pancreatitis, and mesenteric ischemia, and the incidence of ovarian torsion is not known exactly. Although ovarian torsion is very rare, it ranks first among the indications for gynecological emergency surgery. A rare case of a non-ruptured dermoid cyst causing ovarian torsion in the emergency room is presented.

Keywords: dermoid cyst, ovarian torsion, acute abdomen

Introduction

Dermoid cysts are mostly seen in the reproductive period and unilaterally [1]. Dermoid cysts are one of the most common causes of ovarian torsion [2]. The causes of acute abdominal pain are mostly caused by the diagnosis of acute appendicitis, acute pancreatitis, and mesenteric ischemia, and the incidence of ovarian torsion is not known exactly [3,4]. In our case report, we aimed to report the association between non-ruptured dermoid cysts and ovarian torsion, which we rarely encounter in the emergency department.

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Informed Consent

The authors stated that the written consent was obtained from the patient presented with images in the study.

Conflict of Interest

No conflict of interest was declared by the authors.

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Case presentation

A 26-year-old female patient applied to the emergency department with a complaint of abdominal pain that had persisted for 2 h. The general condition of the patient was moderate, cooperative, and oriented, and vital signs were within normal limits. In the physical examination of the patient, who had no known chronic disease, there was widespread tenderness in the abdomen and signs of defense. There were no complaints of diarrhea or constipation. Laboratory tests results were as follows; white blood cells: 9.56 K/ μ L, hemoglobin: 13 g/dl, platelet: 177 K/ μ L, lymphocyte: 0.74 K/ μ L, glucose: 108 mg/dl, urea: 19.7 mg/dl, creatinine: 0.7 mg/dl, CRP: 0.8mg/dl. Aspartate aminotransferase, alanine aminotransferase, and serum electrolytes were within normal limits. No major pathology was observed in the complete urinalysis. In the abdominal ultrasonography image, 1 cm of fluid was observed in the abdomen, a dermoid cyst of 4 cm in diameter with hyperechoic areas in the right ovary was detected, and it was observed that there was no blood flow in the right ovary. Abdominal computed tomography revealed a 55 mm diameter hypodense lesion with calcification and fat densities in the posterior of the uterus (Figures 1 and 2). There was minimal free fluid in the pelvic region. The patient, who consulted with the obstetrics and gynecology department, was operated on at the 6th hour of her application. It was found that the right ovary was torsioned, and the ovaries and tubes were edematous. The ovary was detorsioned with the tuba, and blood supply to the right ovary was restored. The cystic structure was removed and evaluated as a dermoid cyst in the pathological assessment. The patient was discharged after being followed up in the hospital service for 2 d. There were no complications or recurrences during the outpatient clinic follow-ups. The consent of the patient was obtained for the case report.

Figure 1: Coronal CT image of dermoid cyst (arrow)



Figure 2: Axial CT image of dermoid cyst (arrow)



Discussion

Although ovarian torsion is very rare, it ranks first among the indications for gynecological emergency surgery. Half of the patients present with sudden onset of pelvic pain and accompanying nausea and vomiting symptoms, and the definitive treatment is laparoscopy or laparotomy [4,5]. In our case report, diffuse abdominal pain was present and widespread defense was detected on physical examination. No pathological changes were found in inflammatory parameters in laboratory examinations. Because of the absence of gastroenteritis-like clinical findings, an ultrasound examination was requested. There were no complications or recurrences during the outpatient clinic follow-ups. In a study, the risk of torsion was found to be 1–2% higher in pregnant women with dermoid cysts of 4 cm or more [6]. Our patient had a cyst of approximately 4 cm in diameter and was not pregnant. Despite this, it was observed that there were three rounds of torsion in laparoscopy.

The rarity of dermoid cysts and the rare occurrence of ovarian torsion as a complication have led to studies in the literature in which all ovarian pathologies are present. In a study in which 223 cases were examined in five years, dermoid cysts were evaluated as the most common ovarian pathology, and dermoid cysts were observed to be the most common ovarian pathology causing ovarian torsion [7].

Different reports have identified cases of torsion due to dermoid cysts in the fetus or in the premenarchal period [8, 9]. Although our case was of reproductive age and complained of abdominal pain, the operation of the teratoma immediately after torsion develops is a situation that needs special attention in services where the number of patients is high, such as the emergency department.

Although ovarian torsion takes the first place among the indications for gynecological emergency surgery, the period that will pose a risk for the development of ischemia is not yet known exactly. While this period may be extended up to 36 h in pediatric patients, it has been reported that adult patients who are operated on after more than 24 h will not be successful [10]. It has also been reported in various studies that a mean time of 16 h or 15 h may be sufficient [11,12]. Our patient was operated on within 6 h in accordance with the literature and was discharged after 2 d of follow-up.

Conclusion

Ovarian torsion is a clinical condition that should be considered because it is rare and can present with nonspecific clinical findings. Especially patients with acute abdomen should be followed carefully, and diagnosed cases of ovarian torsion should be operated on as soon as possible. Although a dermoid cyst is a rare cause of acute abdomen, it requires urgent surgery. Delays in diagnosis can lead to serious complications and poor prognosis.

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