

CASE REPORT

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Sigmoid Colon Perforation Mimics a Tuboovarian Abscess

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ABSTRACT

Introduction: An adnexal mass may be diagnosed after a routine pelvic ultrasonographic examination or an emergent hospital admission due to rupture of ectopic pregnancy, adnexal torsion or rupture of tuboovarian abscess. It is necessary to evaluate the origin of the mass initially and to classify patients who need further evaluation and treatment for an urgent condition. **Case presentation:** We report a case of sigmoid colon rupture due to sigmoid colon adenocarcinoma presenting as acute abdomen with left adnexal mass in a 28 years old woman. Abdominopelvic computed tomography revealed a left adnexal mass with suspicion of tuboovarian abscess. In laparotomy, rupture of sigmoid colon was observed and resection of sigmoid colon was performed. Histological examination of resection part revealed diagnosis of sigmoid colon adenocarcinoma due to familial adenomatous polyposis. **Conclusion:** This case may be interesting for clinicians because pelvic pain, fever, increased infection markers in the laboratory and mass at ultrasonography or other screening methods could cause a misdiagnosis of tuboovarian abscess especially in reproductive age women. Before the operation of the pelvic mass of all age women with the diagnosis of tuboovarian abscess other causes of the pelvic abscess should come into mind and necessary preparation for operation must be done. **Keywords:** Tuboovarian abscess, sigmoid colon carcinoma, familial adenomatous polyposis.

1. INTRODUCTION

Adnexal mass may be a medical diagnosis for women of all ages during every stage of life. Women are at 5 to 10 percent lifetime risk of undergoing surgery for a suspicious adnexal mass (1). It may originate from the uterus, ovary, fallopian tube, bowel, urinary tract or retroperitoneum. Most frequent gynecological causes of adnexal masses are functional ovarian cyst, corpus luteum cyst, leiomyoma, endometrioma, hydrosalpinx, tuboovarian abscess and benign and malignant ovarian neoplasms. Non-gynecological causes of adnexal masses are gastrointestinal neoplasms, abdominopelvic abscess not derived gynecologic tract, diverticulitis of gastrointestinal tract, appendicitis, bladder diverticulum, ureter bladder diverticulum, peritoneal and omental cysts, intraligamentous masses, and various retroperitoneal lesions (2).

An adnexal mass may be diagnosed during either a routine ultrasonographic imaging or evaluation of acute abdomen such as rupture of ectopic pregnancy, adnexal torsion and rupture of tuboovarian abscess. It is necessary to evaluate the origin of mass initially correctly and to

manage the patients for further appropriate treatment (2).

In this study we presented an acute abdomen case operated with suspicion of left tuboovarian abscess with final diagnosis of sigmoid colon rupture due to carcinoma invasion.

2. CASE REPORT

28-years-old, nulligravid and sexually inactive woman admitted to our hospital emergency department with severe abdominopelvic pain. She described an abdominal pain ongoing approximately two weeks, but her pain has increased to intolerable state one day ago. She also complained about the reduction of appetite but no nausea and vomiting. She also reported that she had previously normal bowel movements. Her last menstrual period was 13 days before. She was also suffering from malodorous vaginal discharge. She had no urinary symptoms such as dysuria or frequency and no gastrointestinal symptoms such as constipation or blockage of colonic gas passage. She had no medical illness history, no surgical history, no allergies, and no remarkable family medical history. Her vital signs at admittance were as follows; systolic blood pressure:

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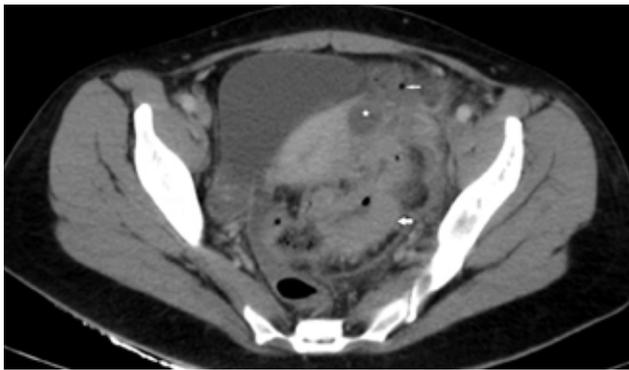


Figure 1. Complex adnexal mass on left adnexa

90 mmHg, diastolic blood pressure: 60 mmHg, heart rate: 110 beat/minute, body temperature: 38.2 °C. Laboratory tests showed increased white cell count (WBC $16.1 \times 10^9/L$ and neutrophils $14.1 \times 10^9/L$) and C-reactive protein (33 ng/L). Hemoglobin level, renal and liver function tests were normal.

The abdominal palpation of the patient revealed abdominal tenderness with defense and rebound positivity indicating acute abdomen. On abdominopelvic ultrasound imaging; uterus size was normal with homogeneous myometrium, endometrial thickness was 9 mm, right ovary was normal. But left tuba uterina and left ovary could not be visualized with abdominal ultrasonographic examination. On left adnexa there was a complex cystic and solid pelvic mass sized with 6x7cm extending towards cul de sac. Then abdominopelvic computed tomography scan was performed and it was showed that there was a complex adnexal mass sized 5x5 cm on left adnexa with conspicuous air-fluid levels supporting tubo-ovarian abscess. The sigmoid colon wall was edematous due to inflammation and beside it in the mesenteric area there was a solid mass measured 41x23mm including air-fluid levels (Figure 1). Our initial diagnosis before operation was ruptured tuboovarian abscess.

Due to acute abdomen, we performed urgent laparotomy with midline incision. On inspection, abdominal cavity was contaminated with spread, purulent and malodorous fluid. It was observed that culde sac was obliterated with intestines and omentum. Interestingly uterus and bilaterally fallopian tubes and ovaries was normal. The culde sac obliteration was eliminated with gentle dissection. After mobilization of pelvic mass from culde sac, it was seen that there was a huge perforation area on sigmoid colon with omental reaction (Figure 2). Resection of sigmoid colon and colostomy were performed. The postoperative period was uneventful. The final diagnosis was adenocarcinoma of familial adenomatous polyposis (FAP) of the sigmoid colon.

3. DISCUSSION

Tubo-ovarian abscess is the end phase of an extending genital tract infection and is mostly avoidable (3). Most commonly women suffer from tubo-ovarian abscess during reproductive period and it results from upper genital tract infection (4). The abscess frequently fills the pelvis and sometimes infuses into lower abdomen. It is generally located on the posterior surface of uterus and



Figure 2. Huge perforation area on sigmoid colon with omental reaction

is circumscribed by sigmoid colon and small bowel loops (3). Approximately 15 percent of cases are complicated with rupture of abscess and this is a life-threatening emergent condition and requires immediate surgery (5).

Colorectal carcinoma is a frequent and mortal disease. According to data published by World Health Organization (WHO), it still remains the third most common cause of cancer death among women (6). FAP is an autosomal dominant syndrome and consists of multiple colorectal adenomas and some extracolonic manifestations throughout the 2nd and 3rd decade of life. The incidence of FAP is reported nearly one in 10.000 individuals and responsible for less than 1 percent of all colorectal cancers (7). Prophylactic colectomy should be done in the second decade of life in all FAP patients because, nearly, one or more of adenomatous polyps progress to adenocarcinoma (8).

The symptoms of patients with colorectal cancer are mostly suspicious and the diagnosis of the disease is often difficult. Asymptomatic individuals may detected by routine screening. Intestinal obstruction, rupture of colon, peritonitis and acute gastrointestinal bleeding are the most common causes of urgent admission (9). Partial obstruction of the colon, peritoneal dissemination, or intestinal perforation leading to generalized peritonitis could cause severe abdominal pain and acute abdomen. Because of the fact that colorectal cancer is a wasting syndrome with severe symptoms including nausea, vomiting, constipation, before the bowel lumen becomes completely obstructed, perforation of the colon is a rare condition and occurs mostly in elderly (10). These symptoms with an adnexal mass finding on imaging easily cause a confusion for the diagnosis of tuboovarian abscess. In our knowledge, we could not find a colon perforation case presented as tuboovarian abscess suspicion with ultrasonographic and computed tomographic screening findings.

In addition to colorectal cancer, other gastrointestinal neoplasms and pathologies may cause the misdiagnosis of the adnexal mass as a tuboovarian abscess. Naliboff et al. reported that left salpingo-oophorectomy was per-

formed in a 31-years-old woman with diagnosis of tuboovarian abscess, but she was re-operated for diagnosis of second pelvic abscess due to diverticulitis which was not diagnosed at the first operation (11). Tuncer et al. reported that a 30-years-old virgin woman suffering from bilateral tuboovarian abscess developed due to colonic diverticulitis (12). They performed parenteral antibiotic therapy with drainage of abscess with ultrasonographic guidance. And they discharged the patient with resolution of pelvic abscess according to clinical and radiological improvement on the twenty second day of therapy.

4. CONCLUSION

Our case is interesting with atypical presentation of sigmoid colon perforation due to carcinoma invasion. Pelvic pain, fever, increased infection markers and tuboovarian abscess suspicion on ultrasonographic and computed tomographic imaging could cause a misdiagnosis of pelvic mass especially in reproductive age women. Before the operation of a pelvic mass of all age women with the diagnosis of tuboovarian abscess, other causes of the pelvic abscess should come into mind and appropriate preoperative preparations must be done.

- **Authors contribution:** Dr Sayan, Dr Yeral, Dr Ozkan, Dr Aydın and Dr Karaca performed the operation and designed the study. Dr Asal evaluated the radiologic findings. Dr Sayan wrote the first draft of the paper. Dr Aydın, Dr Sayan and Dr Sagsoz revised the final version of the paper.
- **Conflict of interest:** The authors declare that there is no conflict of interest regarding the publication of this paper.

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