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#### Dr. Bhaktii Kohli

Senior Resident, Department of Obstetrics & Gynaecology, Maharishi Markandeshwar Medical College & Hospital, Solan, Himachal Pradesh, India

#### Dr. Anushree Sharma

Post Graduate Resident, Department of Obstetrics and Gynaecology, Maharishi Markandeshwar Medical College & Hospital, Solan, Himachal Pradesh, India

#### Dr. Santosh Minhas

Professor and Head of Department, Department of Obstetrics & Gynaecology, Maharishi Markandeshwar Medical College & Hospital, Solan, Himachal Pradesh, India

# Corresponding Author: Dr. Santosh Minhas Professor and Head of Department, Department of Obstetrics & Gynaecology, Maharishi Markandeshwar Medical College & Hospital, Solan, Himachal Pradesh, India

### Ruptured endometrioma: A rare event

#### Dr. Bhaktii Kohli, Dr. Anushree Sharma and Dr. Santosh Minhas

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#### Abstract

Endometriosis is a benign condition which invades locally and hence disseminates widely. Though, it is a hormone dependent and a non-neoplastic condition, yet malignant transformation is possible. When encysted, the cyst enlarges with the cyclic bleeding and the serum gets absorbed in between the menses to make the contents chocolate coloured. The cyst can rupture spontaneously causing acute abdomen and is often confused with ovarian torsion, ectopic pregnancy. Thus, we are reporting a similar case of spontaneous ruptured endometrioma, which is a rare entity.

Keywords: Chemical peritonitis, endometriosis, laparotomy, ruptured ovarian cyst

#### Introduction

Endometriosis represents the presence of endometrial glands and stroma in locations other than the uterine cavity [1]. It affects about 10% of reproductive aged women [2]. Most commonly the endometrial tissue gets implanted on the pelvic peritoneum, ovaries and uterosacral ligaments. Retrograde menstruation is a proposed theory for development of adhesions and subsequent growth in the peritoneum [3]. It is a benign condition associated with chronic pelvic pain, congestive dysmenorrhea, dyspareunia and infertility. Spontaneous rupture of an ovarian endometrioma is a rare complication manifested by acute abdomen and is one of the rarest causes of gynecological emergency. The aim of this case report is to differentiate the rare presentation and associated complications of endometriosis and hence its management.

#### Case

A 32-year-old P1L1 reported to the emergency with the complaint of pain lower abdomen for past 5-6 days with increasing severity for past 1 day and with associated nausea and vomiting for past 1 day. She had a history of open cystectomy 6 years back at a private hospital with no records available. On examination, the patient was cooperative with a pulse rate of 120/min low volume pulse and a blood pressure of 80/60 mmHg. On per abdomen examination tenderness, guarding and rigidity was present in the right iliac region. On per speculum examination, no abnormality was detected while on per vaginal examination, uterus was retroverted, normal size with fullness and tenderness present in bilateral fornixes.

#### Urine pregnancy test was negative

Ultrasound features were suggestive of a right ovarian cyst of approx. 5\*5 cm (figure 1) with no definitive vascularity in the periphery and moderate amount of fluid in the pelvis (figure 2).



Fig 1: arrow shows cyst of 5\*5 cm



Fig 2: Shows fluid in pelvis (hemoperitoneum)

All the routine blood investigations were normal.

Plan of emergency laparotomy was made in view of hemodynamic instability of the patient, keeping in mind a differential diagnosis of ruptured ovarian cyst, ovarian torsion and chronic ectopic pregnancy. Per operatively, right ovarian ruptured hemorrhagic cyst of approximate size of 10\*16 cm was present with rest of the adnexa and uterus normal. (Figure.3). 250 -300 ml of chocolate colored fluid was drained from the abdominal cavity. Endometriotic lesions were identified on the gut and uterosacral ligament. A thorough saline wash of the peritoneal cavity was done intraoperatively.



Fig 3: Ovary with ruptured chocolate cyst with fallopian tube of that side

In the postoperative period, patient developed abdominal distention with features suggestive of chronic peritonitis and bilateral pleural effusion on postoperative day 2. Patient was investigated to rule out tuberculosis and all the investigations were negative. Patient was managed conservatively with Ryle's tube insertion, antibiotics and diuretics and was later discharged under satisfactory conditions on 13<sup>th</sup> postoperative day.

#### **Discussion**

Endometriosis was first described in 1860 and the cause of this enigmatic female disease is still unclear [4]. It is a common diagnosis in gynecology OPD but its presentation as acute abdomen in emergency is a rare event. Until date only a few cases of spontaneous endometrioma rupture have been reported [5-6]. The etiology of spontaneous rupture is the increasing size of the ovarian cyst due to the rapid growth of the endometriotic tissue causing increased pressure in the cyst. The event of rupture is proposed to be more common in patients with previous history of endometriosis due to the increased stretching forces between the previous adhesions and the enlarging ovarian cyst. The diagnosis is often missed due to low suspicion and non-specific presentation.

Often the diagnosis is made intraoperatively although sonography is a useful aid which reveals an ovarian cyst with low level internal echoes and free fluid in the pelvis.

Ruptured ovarian cyst can be managed conservatively unless hemodynamic instability ensues. As in our case, the patient was taken up for emergency laparotomy in view of hemodynamic instability. An important postoperative complication which occurred in our case was chemical peritonitis due to the inflammatory response of the peritoneum to the endometriotic tissue released after the cyst rupture. This complication often prolongs the hospital stay and adds to the morbidity of the patient. Thus, a timely diagnosis and a thorough saline wash intraoperatively becomes an important prerequisite to reduce the complication rate.

#### Conclusion

Ruptured endometriomas should be kept in mind while attending the patient of acute abdomen, especially those with an ovarian cyst or previous history of endometriosis. Timely surgical intervention can help to reduce the morbidity and improve the prognosis of the patients. Those presenting with recurrent cysts generally have a poorer outcome.

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