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# Infected Endometrioma with Ascites and Bilateral Pleural Effusion

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## Introduction

Although endometriotic cysts are common, the occurrence of infection in anti-endometriotic cysts is rarely seen. No more than 120 cases of ovarian abscess and fewer than 10 cases of ascites and pleural effusion caused by endometriosis have been reported<sup>1</sup>. We present the first reported case of ascites and bilateral pleural effusion associated with an ovarian abscess originating within an endometrioma.

## Case Report

A 36 year old, nulliparous woman presented to the emergency room of the Aga Khan University Hospital, with 12 days history of lower abdominal pain, gradually increasing abdominal distention and occasional vomiting. There were no urinary and bowel symptoms. On examination she was anemic; had a temperature of 38°C, a pulse of 105/min and a blood pressure of 130/90 mm Hg.

Abdominal examination revealed 18 weeks sized mass arising from the pelvis, it was tender on palpation. Shifting dullness was positive suggestive of ascites. On pelvic examination the cervix was normal, size of the uterus could not be made out. The right adnexa was occupied by a large cystic cum solid mass, immobile and mildly tender.

Her Hb was 8.8 gm/dl, Hct 27.3%, white cell count 18.3 cu.mm neutrophils 75%, lymphocytes 15%, eosinophils 1%, monocytes 3%, ESR 54 mm/hr. Liver, renal function tests and urine detailed report were normal. Cytology and AFB culture of ascites were negative. CA 125 was elevated to 240 IU/ml. A chest X-ray revealed minimal bilateral pleural effusion. Abdominal ultrasound showed a multiloculated mass 15x11 cm, arising from the right adnexa and moderate amount of ascites. CT scan revealed a large multiloculated semi-solid mass occupying the pelvis. Enlarged lymph nodes were also seen along the right iliac vessels. A provisional diagnosis of ovarian tumour with possible malignancy was made.

In her past history, six years ago, she had had a left salpingo-oophorectomy for an ovarian cyst. Histopathology was not known. A year later she was investigated for lower abdominal pain and primary infertility. There was no history of pelvic inflammatory disease or tuberculosis. She had a regular menstrual cycle but a history of dysmenorrhoea. On hysterosalpingogram, right fallopian tube was patent. Few months later a laparoscopy was performed. The uterus was in mid position and immobile due to dense adhesions between the bowel, uterus, left lateral pelvic wall and the Pouch of Douglas. In the right adnexal region there was a 5x5 cm clear fluid filled para-ovarian cyst adherent to the posterior wall of the uterus. The right fallopian tube was normal and patent. No evidence of endometriosis was seen. The cyst was aspirated. The cystic fluid was negative for malignant cells and AFB culture. Histopathology of endometrium was normal. Laparotomy was undertaken six days after admission and I/V antibiotic therapy. She was febrile only on admission. At surgery, the bowel was adherent to the anterior abdominal wall. These adhesions were separated digitally. A 15x15 cm ovarian mass was found adherent to bowel, urinary bladder and in the Pouch of Douglas. During separation the cyst ruptured and 300 ml of foul smelling purulent fluid was drained and sent for culture. A right salpingo-oophorectomy was performed. The uterus was not removed because of dense adhesions between it, the sigmoid colon and the rectum.

Histological examination of the removed ovarian mass along with the fallopian tube revealed extensive

endometriosis. with the presence of multiple endometrial glands surrounded by stromal cells. Fallopian tube showed chronic salpingitis. There was no evidence of granuloma or malignancy. Culture of pus grew E-Coli sensitive to Gentamycin.

The patient did well post-operatively and was discharged on the seventh post-operative day. Routine evaluation at six weeks and a year later showed no signs of ascites.

## Discussion

A combination of ascites and endometriosis is rare as fewer than ten cases of ascites and pleural effusion associated with intra-abdominal endometriosis have been reported since 1954 when Brews<sup>1</sup> first described this entity.

A case of an infected endometrioma with ascites and bilateral pleural effusion in a 36-year-old nulliparous has been described. Endometriotic cysts are not uncommon. The occurrence of an infection in an endometrioma is a rare gynecological entity Schmidt et al<sup>2</sup> reported infected endometriotic cysts for the first time in 1981. In a retrospective analysis they reviewed 510 cases of endometriotic cysts over a period of 15 years, in their hospital. They found only 11 cases had a pathologically confirmed infected endometriotic cyst. Wetchler and Dunn<sup>3</sup> in a review of the literature reported 120 cases of ovarian abscesses without involvement of the fallopian tube. They proposed 3 primary causes for ovarian abscess; inoculation of the bacteria directly into the ovarian stroma from surgical trauma to the ovarian capsule, haematogenous spread and lymphatic spread.

Yaron et al<sup>4</sup> described a case of bilateral infection of an endometriotic cyst after oocyte aspiration for IVF. Lipscomb et al<sup>5</sup> in 1991 reported on a case of ovarian abscess within an endometrioma. They postulated that this may have been caused by haematogenic spread of bacteria from a urinary tract infection. Martino et al<sup>6</sup> described a case of infection in an endometrioma following percutaneous fine needle aspiration in a 16 year old girl. Flanagan et al<sup>7</sup> found massive ascites and right sided pleural effusion caused by intra-abdominal endometriosis in a 30 year old woman with a history of recurrent pleural effusion.

It is difficult to determine the route of infection in our case. However, it can be speculated that in this patient the source of infection was haematogenous due to adhesions between bowel and necrotic tissue. In-patients in whom salpingitis is not present, the source of infection remains an enigma<sup>2</sup>. Bilateral pleural effusion and ascites could have been caused by pleural irritation as with Meigs's syndrome<sup>8,9</sup>. Such patients usually present to the pulmonologist, some present with increasing abdominal distension and abdominal pain.

Many of these patients are young and infertile. Endometriosis should be considered in the differential diagnosis whenever ascites and a pelvic mass are associated and other causes such as cardiac disease renal disease and tuberculosis are excluded.

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