

# A Rare Case of Deep Pelvic Endometriosis Presenting with Serous Ascites and Infertility

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## ABSTRACT

In this study it is aimed to define a rare case of deep pelvic endometriosis with massive serous ascites and infertility.

Literature search revealed sporadic cases of endometriosis presenting with bloody or brownish ascites, some had also pleural effusion and CA-125 levels were elevated in all cases.

Our case had normal CA-125 level and normal looking ovaries. Besides classic endometriosis symptoms, our case was asymptomatic. Endometriosis is diagnosed postoperatively on the basis of histopathology. Management of infertility was IVF-ET, which resulted with a successful pregnancy.

This is the first case of deep pelvic endometriosis presenting with serous ascites and infertility. More reports are required to determine whether endometriosis with serous ascites has good prognosis in infertility or not.

**Keywords:** Endometriosis, Serous ascites, Infertility

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## Introduction

Endometriosis mostly presents with pelvic pain, dyspareunia or dysmenorrhea, very rarely ascites and even pleural effusions are seen. Carbohydrate antigen 125 (CA-125) is a tumour marker and can be elevated in most of the cases and sometimes CA-125 levels are found so high that co-occurrence with endometriomas leads clinician to suspect from malignancy. Literature search revealed sporadic cases of endometriosis presenting with bloody or brownish ascites. Elevated CA-125 levels are common in all these cases whilst some had pleural effusion.

This is the first case of deep pelvic endometriosis presenting with serous ascites and infertility, with normal looking ovaries and normal CA-125 levels. Management is same as other endometriosis cases, while we achieved pregnancy with in vitro fertilisation. More reports are required to determine whether endometriosis with serous ascites has good prognosis in infertility or not.

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## Case Report

A 25-year-old patient referred to our clinic for infertility and pelvic ascites with 4 years of unprotected intercourse. Her menstrual period was regular, she did not report any dysmenorrhea or dyspareunia, also she did not experience any pelvic pain during menses. Patient was otherwise healthy without any systemic illness. Pelvic examination revealed normal external genitalia and cervix. Body mass index calculated to be 19 kg/m<sup>2</sup>. Her PAP smear result was normal. Transvaginal ultrasonography (USG) result revealed a normal uterus with regular 3 mm endometrial lining, her both ovaries were normal with including 4-5 antral follicles in each ovaries and there was high volume of free fluid in the cul-de-sac region (Figure 1). The free fluid in pelvis was known for more than a year, and different centers examined the fluid by aspirating thorough culdocentesis, and many cultures were taken and results were non diagnostic.

Follicular Stimulating Hormone (FSH) level on third day of menstrual cycle was 5 mLU/mL, Estradiol level was 42 pg/ml and mid-luteal Progesterone level was 8 ng/mL, all were in normal ranges. CA-125 level was 8.21 IU/mL and in normal ranges. Hysterosalpingography revealed bilateral patent fallopian tubes, and normal uterine cavity. Her husband's spermogram was normal. Her systemic evaluation was normal, renal and liver function tests, complete blood count, urinalysis, thyroid functions and electrolytes were in normal ranges; abdominal USG revealed free ascitic fluid in pelvis and in Morrison's space. Chest X-ray was normal, there were no pleural effusion. Tuberculin skin test was negative, sputum culture was also normal.

We performed laparoscopy for ascites and infertility. There was 800 cc free serous ascitic fluid in the pelvic cavity. Uterus and bilateral ovaries appeared normal but relation between bilateral fallopian tubes and ovaries were abnormal, fimbrial ends were edematous and distorted. There were 6 deep pelvic endometriosis nodules near bilateral pelvic ligaments, vesicouterine regions and both ovarian fossas. There were multiple peritoneal endometriotic foci (Figure 2). We aspirated serous fluid, samples were taken for further examinations. Endometriotic nodules were excised, and peritoneal endometriotic foci cauterized. Histopathologic examination of excised nodules revealed diagnosis as endometriosis externa. Cytology was benign, the bacterial cultures were negative. Polymerised Chain Reaction Test (PCR) was negative.

We evaluated this patient as an unusual case of deep pelvic endometriosis presenting with serous ascites and endometriotic nodules. Three doses of Gonadotropin Releasing Hormone (GnRH) analogue was given postoperatively with 21 days interval. On the third month we controlled the patient with USG examination, there were no fluid in the abdomen nor in cul-de-sac region. In vitro fertilisation and embryo transfer (IVF-ET) with GnRH- antagonist drugs performed for infertility treatment.

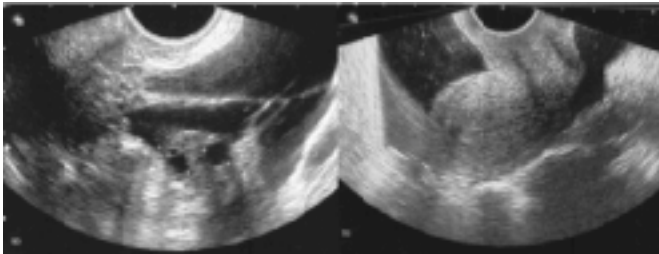


Figure 1: Transvaginal ultrasonographic view of the patient. A: Right over and 2 antral follicles, free fluid in cul-de-sac. B: Uterus and free fluid in cul-de-sac.

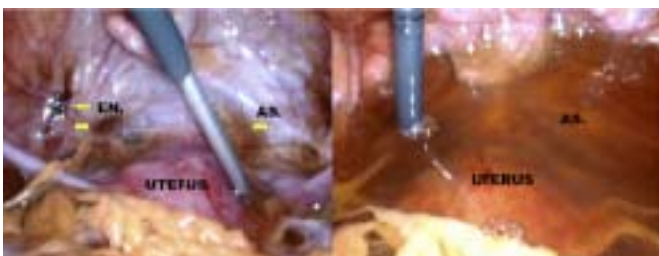


Figure 2: Laparoscopic appearance of the patient. A: Serous ascitic fluid seen when entering the peritoneum. B: Endometriotic foci on the peritoneal wall and aspirated ascites

AS: Ascitic fluid, EN: Endometriotic foci

## Discussion

Endometriosis is defined as ectopic endometrial tissue outside uterine cavity. Most frequent localisation is peritoneum, ovaries and rectovaginal space. The common symptoms are dysmenorrhea, pelvic pain, dysparonia and infertility.

Sometimes the ectopic uterine tissues are seen in gastorintestinal system, urinary system and outside abdominal or pelvic cavity, and give symptoms monthly or continuous according to location.<sup>1</sup>

Ascites with endometriosis is rare and these cases are classified as deep pelvic endometriosis. There are various theories for ascite production, the generally acknowledged one is lymphatic obstruction theory. Ascitic fluid is found as hemorrhagic in 50% and brownish in other 50% of cases till the day, there were no recorded serous ascites cases so far.<sup>2</sup> Brews et. al.<sup>3</sup> reported first hemorrhagic ascites and endometriosis case in 1954, since that time there were 63 cases presented to literature. Our case had serous ascites and this finding is different than other cases in literature.

CA-125 levels are generally moderately elevated in endometriosis cases, when together with ascites levels are generally in between 30 and 4300's, in the literature there is a report of Kahraman et. al<sup>4</sup>, having this level as 7900. In our case, CA-125 was not elevated, and found in normal reference levels.

Hemorrhagic ascite and elevated CA-125 levels together with large ovarian cysts (mostly endometriomas) were considered as malignancies and operated likely, and the final pathologic investigation revealed only endometriosis.<sup>5</sup> We found serous ascitic fluid and bilateral normal ovaries also normal CA-125 level, so we excluded malignancy before operation.

Closely associated with endometriosis, as roughly 30% of infertile patients have endometriosis and 10-30% of infertile patients have endometriosis.<sup>6</sup> Treatment of endometriosis presenting with ascites is similar to other endometriosis cases. If left untreated these cases present with progressively increase in ascites and increase abdominal circumference also 38% of patients develop dyspnea due to pleural effusion.<sup>7</sup> In a study of infertile patients with endometriosis and pelvic ascite, because of increased ascite production and risk of ovarian hyperstimulation, they suggested that ovulation induction treatment required close monitoring.<sup>8</sup> Our patient presented with infertility, even her ascitic fluid was not in hemorrhagic nature, we applied 3 cycles of GnRH-analogue and IVF-ET protocol revealed a succesful pregnancy outcome, the woman gave birth vaginally to a healthy baby in 38<sup>th</sup> gestational week.

This article is the first case of deep pelvic endometriosis presenting with serous ascites and infertility. Management seems to be same as other endometriosis cases with ascites. More reports are required to determine whether endometriosis with serous ascite has good prognosis in infertility or not.

## Seröz Asit ve İnfertilite ile Başvuran Nadir Bir Derin Pelvik Endometriozis Olgusu

### ÖZET

Bu çalışmada seröz asit ve infertilite ile başvuran nadir bir derin pelvik endometriozis vakası sunuyoruz.

Literatürde batında kanlı veya kahverengimsi asit oluşumu ile beraber görülen nadir endometriozis vakalarına olgu sunumları şeklinde rastlanmaktadır. Bazı olgularda batındaki asite eşlik eden plevral efüzyon da olabilmektedir. Bu vakaların hepsinde CA-125 seviyesi yükselmiştir. Bizim vakamızda CA-125 seviyesi normaldi ve overler normal görünümde idi. Klasik endometriozis şikayetlerinin aksine bizim hastamızda herhangi bir semptom yoktu. Endometriozis tanısı laparoskopi sonrasında histopatolojik olarak konulmuştur. Vakanın infertilitesine yönelik tedavisi diğer derin pelvik endometriozis vakaları ile aynı olmuş, başarılı bir tüp bebek tedavisi ile gebelik elde edilmiş ve hasta normal doğum yapmıştır.

Bu makale derin pelvik endometriozisin normal over görünümü ile normal CA-125 seviyeleri olup, seröz asit ve infertilite ile beraber olması açısından literatürde görülen ilk makaledir. İnfertilite konusunda seröz asitli endometriozislerin iyi prognoza sahip olup olmadığının anlaşılması için daha çok vaka görülmesine ihtiyaç vardır.

**Anahtar Kelimeler:** Endometriozis, Seröz asit, İnfertilite

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