

PERITONEAL ENDOMETRIOSIS REVEALED BY A RECURRENT HEMORRHAGIC ASCITES: A CASE REPORT AND REVIEW OF LITERATURE**Fatima Elmangoub^{*1}, M. Elmehdi Elhassani¹, Rachid Aitbouhou¹, Jaouad Kouach¹, Ahmed Reggad² and D. Rahhali Moussaoui¹**¹Department of Gynecology-Obstetric, Military Training Hospital Med V, Rabat, Morocco.²Department of Virology and Infectious Diseases, Military Training Hospital Med V, Rabat, Morocco.***Corresponding Author: Dr. Fatima Elmangoub**

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ABSTRACT

Endometriosis is a relatively common disease. It mainly affects young, nulliparous women of reproductive age. It is defined by the ectopic presence and development of the endometrial epithelium and stroma outside the uterine cavity, mainly at the peritoneum and ovaries, responsible for very varied and non-specific clinical pictures. Extragenital forms lead to evocative manifestations through their perimenstrual recrudescence. Endometriosis - related hemorrhagic ascites is exceptional. Its diagnosis is difficult, and if this association is encountered, neoplasm must be evoked, essentially the ovarian malignancy, that should be eliminated first. The diagnosis has to be confirmed by the anatomopathological examination of biopsies or resection during laparoscopy. The endometriosis -related hemorrhagic ascites treatment is medical and surgical. The medical treatment is an hormonal-based therapy with LHRH analogues or a long term progestative therapy with frequent tendency of ascites recurrence. In the light of a literature review, we report a case of a peritoneal endometriosis revealed by a recurrent ascites in a 24-year-old nulliparous patient. The regression of ascites was obtained after six months of LHRH analogues treatment. Three months later, the patient was subsequently followed up for her spontaneously conceived pregnancy. She had a normal vaginal delivery at 41 weeks of gestational age. The postpartum period was marked by a recurrence of ascites.

KEYWORDS: Peritoneal Endometriosis, Hemorrhagic Ascites, Laparoscopy.**INTRODUCTION**

Endometriosis is a relatively common disease, affecting 2 % of the general population of all ages, and 10 % of women aged between 30 to 40 years. Its frequency is higher in women with infertility history: 30 to 40 %.^[1,2,3]

It is defined by the presence and ectopic development of the endometrial epithelium and stroma outside the uterine cavity, mainly at the peritoneum and ovaries, accounting for very varied and non specific clinical pictures.

Endometriosis-related to recurrent hemorrhagic ascites is exceptional^[4] with 63 cases published since the first case described in 1954 until 2010.^[3] We report in the light of literature review, an additional case of a peritoneal endometriosis revealed by recurrent ascites diagnosed in a 24-year-old nulliparous patient.

OBSERVATION

This case is about a 24-year-old patient, nulliparous, who has been married for six months without remarkable, personal or family medical history; especially she had no notion of tuberculosis or tuberculous contagion. At first,

she was hospitalized in infectiology and virology service for etiological investigation research of isolated recurrent hemorrhagic ascites.

A month before her admission, the patient presented an abdominal distension associated with an unquantified weight loss, justifying a first consultation and the diagnosis of an abundant ascites was made. Initially, the ascites was drained giving a sterile hematic exudative fluid. She reconsulted two weeks later for the recurrence of the ascites. During the interrogation, she reported the notion of menorrhagia and a deep dyspareunia since her menarche.

The patient was in a fairly good general condition, weighing 50 kg for a height of 163 cm, with slightly discolored conjunctiva, normotensive, normal heart rate and afebrile.

The abdominal examination found an over distended abdomen with a narrowed umbilicus and diffuse dullness without collateral venous circulation and without hepato splenomegaly or signs of right heart failure. She had

neither lower extremity edema nor pleural effusion syndrome.

Abdominal and endovaginal ultrasound confirmed the voluminous ascites without associated ovarian or abdominal mass “figure 1 a; b”.



Figure. 1 a: voluminous ascites.



Figure. 1 (a; b): endovaginal ultrasound imaging showing up a voluminous ascites (a;b) with normal left ovarie (a).

Considering that Morocco is an endemic country of tuberculosis, chest x-ray was performed in search for mediastinal, parenchymal and pleural lesions, and found normal.

A hepatorenal and pancreatic biological evaluation was correct. Tumor markers, including CA 125, were normal at 11.8 IU / ml. She had anemia secondary to menorrhagia. A pelvic magnetic resonance imaging (MRI) was without abnormality.

A draining of the ascetic fluid for biochemical and cytobacteriological diagnosis had permitted to drain out five liters of a hematological liquid which was a sterile exudate predominantly lymphocyte without atypical cells.

Facing the negative result of biological and radiological evaluation, an endoscopic surgical exploration was required.

During exploration, we noted the presence of epiplo parietal adhesions at the abdominal level, but the ovaries were without any abnormality. Almost all the peritoneum and the omentum were affected by a diffuse inflammation with a hypervascular aspect. On the surface of the parietal peritoneum as well as uterosacral ligaments, we noticed the presence of micronodular lesions characterizing endometriosis: blackish or whitish lesions indicated peritoneal fibrosis and red lesions showed the evolutive forms “figure 2 a; b”. Biopsies of these lesions and paracolic gutters as well, were performed. Histopathological examination confirmed the diagnosis of peritoneal endometriosis.



Figure 2: different laparoscopic aspect of endometriosis: a: diffuse inflammation with hypervascular aspect.



Figure. 2: b: uterosacral ligaments with micronodular lesions characterizing endometriosis.

DISCUSSION

The first case of recurrent ascites revealing peritoneal endometriosis was described in 1954 by Brews.^[4] This association remains rare with 63 cases published since that time until 2010.

Haemorrhagic ascites usually consists of peritoneal inflammation, the main etiologies are neoplastic lesions of the peritoneum, whether primitive or secondary^[1], pelvic or peritoneal tuberculosis, liver disease and congestive heart failure. Endometriosis remains an unusual cause of ascites.^[3]

The physiopathogeny of this affection remains poorly elucidated. However, two main hypotheses are retained

to explain the endometriosis ethiopathogenic mechanism. Firstly, there is the reflux of blood through the fallopian tubes during menstruation. Bernstein *et al.*^[3] have shown that in endometriosis associated with ascites, endometrial cell migration stimulates peritoneal cell differentiation and high secretion of angiogenic factors, adhesion growth factors, and cytokines into the peritoneal fluid that causes ascites.^[5] Second hypothesis suggests rupture of an endometriotic cyst that causes irritation of the peritoneal cells and formation of an exudative fluid.^[3]

The clinical symptoms of peritoneal endometriosis are polymorphic. The usual suggestive signs and frequently encountered include: dysmenorrhea 64 %, pelvic pain 44 %, deep dyspareunia 37 %, infertility 36 %, menorrhagia and / or menometrorrhagia 16 %.^[4,1,2] Peritoneal endometriosis may also involve extra gynecological sites essentially urinary tracts, gastrointestinal tracts or extra abdominal sites, showing up by haematuria, haemoptysis and exceptionally, by pleural effusion and / or pericardial effusion during menstruation.^[5]

Recurrent hemorrhagic ascites secondary to endometriosis is an unusual association. It affects nulliparous women of childbearing age^[6] with an age ranging from 19 to 51 years and an average age of 29 years.^[3] Its clinical diagnosis remains difficult because of the variety and non-specificity of its symptoms. So, the diagnostic approach to a recurrent hemorrhagic ascites requires elimination of its two main differential diagnoses: neoplastic and tuberculous origins.

The majority of patients with related ascites - endometriosis had abdominal distension, pelvic pain with loss of weight, the other symptoms related to endometriosis including menorrhagia and deep dyspareunia were found after careful questioning, such as it was the case of our patient.

Endovaginal pelvic ultrasound pinpoints diagnosis of ascites often associated with an endometrioma, supplemented by an abdominal ultrasound, excludes other lesions that may be cause of ascites.

As part of the etiological assessment of isolated ascites, a radiological assessment including a chest x-ray, a thoracoabdominal CT scan and / or an MRI may be requested^[5]; for our patient, it was found normal.

Biologically, the hepatorenal and pancreatic assessment in these patients was correct, so was the case for our patient. The level of the CA 125 marker is often high or even very high exceeding 100 IU / ml, but the dosage in our case was normal.

Ascetic fluid puncture in patients with ascites and endometriosis association showed a macroscopically haematic liquid of which biochemical and cytobacteriological assessment had showed a sterile exudate, without Koch's bacillus and nor neoplastic cells.

At the end of the assessment and in front of its limits to diagnose ascites-related endometriosis, an exploratory laparoscopy remains the necessary gold standard for diagnosis. The laparoscopy allows excluding other causes of ascites, making biopsies for anatomopathological study and a complete assessment of the lesions for the prognosis evaluation and the therapeutic strategy. During the exploration, diffuse inflammatory lesions are noted. Different forms of peritoneal nodules can be observed; granulations of 0.2 to 1 mm in diameter, blackish-blue color, evolving red lesions and cicatricial white spots as well, are classic aspects of endometriosis. Adhesions are also an essential component of peritoneal endometriosis.

For a non-invasive means of diagnosis, several studies are focused on the study of biomarkers in the peritoneal fluid, blood or urine of women with endometriosis and control groups. Aggar Wall *et al.*^[6] demonstrated that interleukin 17 secreted by T helper 17 cells (Th17) is found in blood and peritoneal fluid, but at higher dosages in the second one and at different stages of endometriosis. It was also found that the concentration of interleukin-17 was proportional to the stages of endometriosis.^[6] Other biomarkers (interleukin 6 and glycodelin A) are also being studied and their elevation would be a factor predictive to endometriotic affection and their level would be correlated with the evolution stage of the disease.^[7]

Ascites related endometriosis is usually and mostly massive. Its management is the same as that of endometriosis. Its treatment remains unclassified. Radical surgery based on total hysterectomy with bilateral anexectomy is the definitive treatment, but it remains of limited indication in front of the young age of the women affected by this disease and their desire of pregnancy.^[3] Thus, conservative surgery may be proposed based on excision, if necessary, of ovarian and peritoneal lesions.

Medical treatment can also be discussed in relation to the hormone-sensitivity of the effusions.^[5] The LHRH analogues used since 1991 have given a satisfactory response with rapid regression of ascites.^[3] Currently, the treatment is based on the association of long-term LHRH analogs with an add-back therapy to limit osteoporosis, or the continuous prescription of the norpregnane family as progestin treatment.

In our case, the patient was put on gonadotrophin realizing hormone analogues for six months and a full remission of the peritoneal effusion was obtained.

Three months after stopping hormonal treatment, she became pregnant. In the first trimester, the pelvic ultrasound showed a recurrence of ascites "Figure 3" that did not progress during pregnancy. Delivery was vaginal at 41 weeks of amenorrhea, of a healthy newborn.



Figure. 3: ultrasound imaging showing an evolute pregnancy (in the first trimester) with ascites.

She was seen two months later. She had no complaint, but the pelvic ultrasound showed the recurrence of the ascites.

CONCLUSION

Hemorrhagic ascites related endometriosis is a rare entity. It mainly affects young women nulliparous, of childbearing age. Its diagnosis is difficult because the symptomatology is variable and non-specific. It is characterized by a perimenstrual recrudescence. The presence of haemorrhagic ascites basically evokes the neoplastic pathology, especially ovarian which must be excluded first. The diagnosis is confirmed by anatomopathological examination of biopsies or excision lesions during laparoscopy. The management is medical and surgical. Medical treatment is based on hormonal therapy with LHRH agonist or long-lasting progestogens with frequent tendency to recurrence.

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