

Novel diagnosis of mesenteric endometrioma

Case report

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Abstract

Rationale: Mesenteric cysts are benign gastrointestinal cystic lesions, with an incidence of <1/100 000. They usually develop in the small bowel mesentery, mesocolon (24%), retroperitoneum (14.5%), and very rarely originate from the sigmoid mesentery. Endometriomas represent a localized type of endometriosis and are usually within the ovary. Our case is unique because there are no reports in the literature of endometrial mesenteric cysts.

Patient concerns: We present a case of a 29-year-old woman who underwent a routine gynecologic control.

Diagnosis: Clinical examination and imaging identified 2 endometriomas on the left and posterior to the uterus.

Interventions: The patient underwent exploratory laparoscopy. Unexpectedly, a 10 cm mesenteric cyst was identified; this was associated with adhesions in the left adnexal area and a left ovarian endometrioma. The classic surgical approach which was necessary identified the mesenteric cyst with cranial mesosigmoid and ileal adhesions, as well as distal adhesions which included the uterus, ileum, left ovarian endometrioma, left hydrosalpinx, left ureter, and rectum. The cyst was removed completely and a left adnexectomy was performed because of the presence of the endometrioma and adhesions.

Outcomes: The patient's outcome was favorable, with discharge at 72 hours after surgery. The histopathological report revealed that both the mesenteric and ovarian cysts were endometriomas.

Lessons: Our case is unusual in that a mesenteric cyst was identified in a patient with no clinical symptoms. Furthermore, the histopathological examination revealed the endometriotic origin of the mesenteric cyst which has not previously been reported in the literature.

Abbreviations: MRI = magnetic resonance imaging, ROMA = Risk of Ovarian Malignancy Algorithm.

Keywords: endometrioma, endometriosis, mesenteric cyst

1. Introduction

Endometriosis represents endometrium-like tissue outside the uterus and affects almost 10% of women of reproductive age. The presence of endometrium outside the uterine cavity can be

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explained by many theories; the mechanism most widely accepted is that of retrograde menstruation.^[1] Other authors believe that it is a result of celomic metaplasia.^[2] The structure most frequently affected by endometriosis is the ovary, but involvement of the fallopian tubes, pelvic serosa, rectum, retroperitoneal structures, and lungs has also been described. Endometriotic cysts typically contain old blood and are also referred to as chocolate cysts or endometriomas.^[3]

Mesenteric cysts are rare benign abdominal tumors with an incidence of <1:100,000,^[4] and the majority of case reports in the literature are in children. They can cause abdominal pain, distention or other non-specific symptoms, but are often diagnosed incidentally. They can develop in the small bowel mesentery, mesocolon, and retroperitoneum. A mesenteric cyst originating in the sigmoid mesocolon is a rare finding with only 4 cases reported to date.^[5] Histologically, mesenteric cysts are heterogeneous, being described as lymphangiomas,^[6] chyloid cysts,^[7] teratomas, of even urogenital cysts.^[8] Most present as giant cysts without evidence of malignancy.^[9] There are no reports in the literature of endometrial mesenteric cysts. The most similar case to ours was that of a retroduodenopancreatic endometriotic cyst in a postpartum woman who had laparoscopic treatment.^[10]

2. Case report

We present a case of a 29-year-old woman without any medical or obstetric history who underwent a gynecologic examination

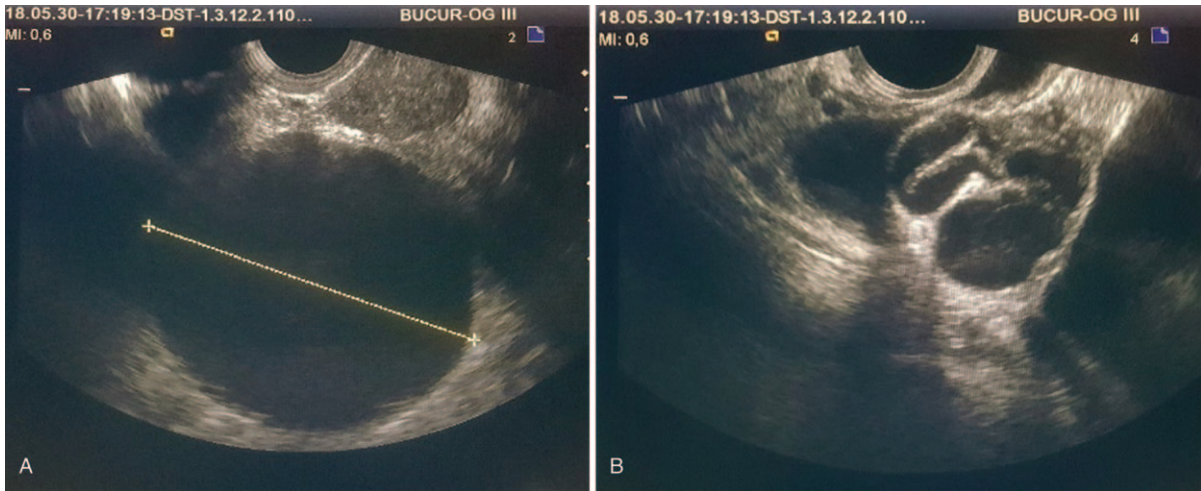


Figure 1. (A and B). Transvaginal ultrasound aspect.

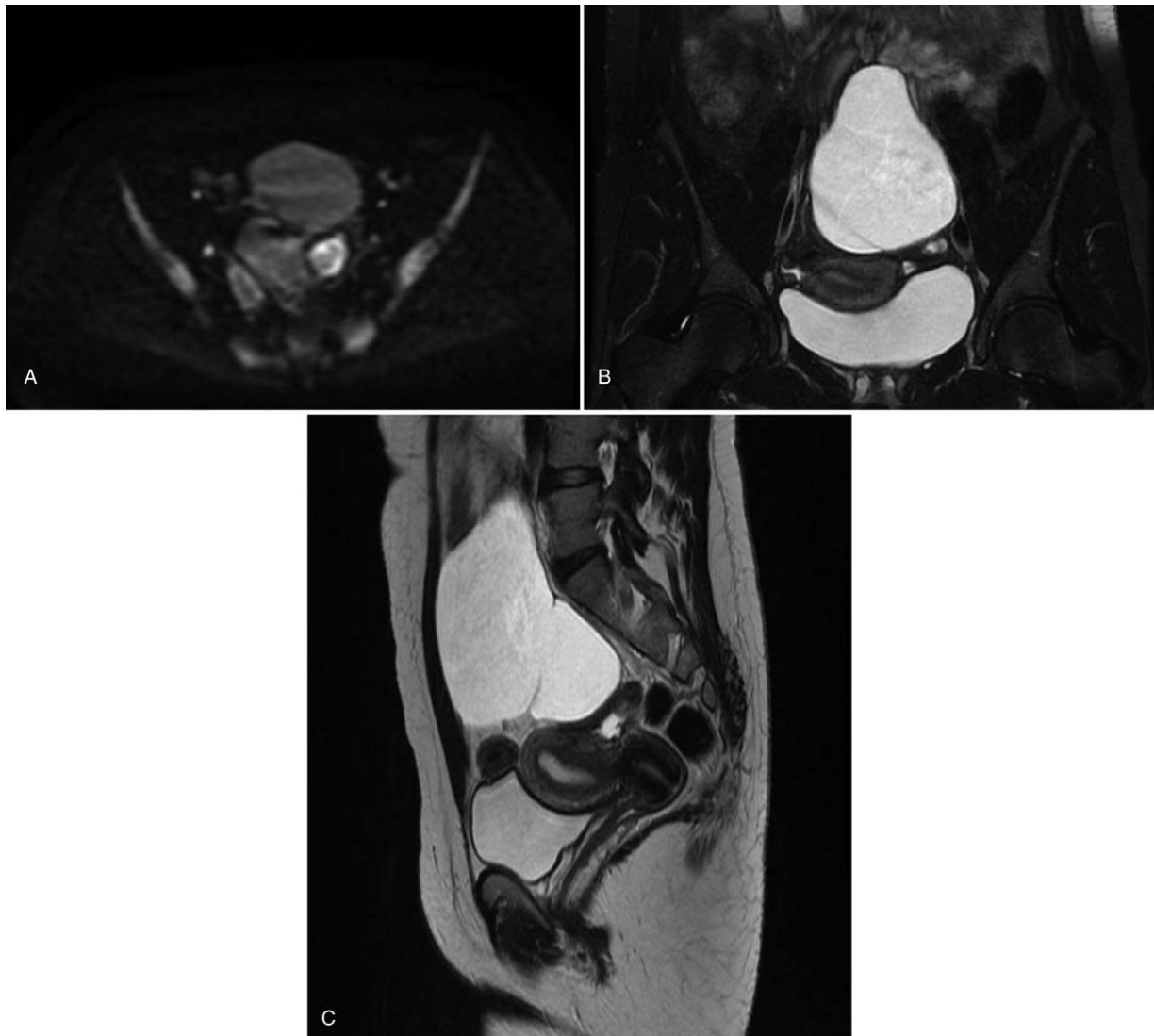


Figure 2. (A, B, and C). MRI aspect. MRI=magnetic resonance imaging.

for infertility. Clinical examination revealed a normal-sized uterus, with a well-defined tumor posterior and to the left of the uterus, about 9 cm in diameter, with cystic consistency, mobile, and tender to palpation. The right adnexa appeared normal.

Ultrasound examination identified a normal uterus and an 8 by 9 cm well-defined cystic mass with a thin capsule and ground glass echogenicity located posterior to the uterus. These findings were suggestive of an endometrioma. Another endometrioma measuring 2 by 2.5 cm was noted on the left ovary, associated with a hypoechoic structure suggestive of a left hydrosalpinx (Fig. 1 A and B-Ultrasound aspect of the cyst). The magnetic resonance imaging (MRI) examination described 2 endometriomas of the left ovary with the same diameters as on the ultrasound scan (Fig. 2A, B and C-MRI images of pelvis). CA-125 (Cancer antigen 125) and Risk of Ovarian Malignancy Algorithm (ROMA) score were in normal ranges.

The patient underwent exploratory laparoscopy. During the intervention, we identified normal uterus and right adnexa. The pelvic peritoneum presented multiple focal lesions suggestive of

active peritoneal endometriosis. The left adnexa was replaced by a mass that included a 2 by 4 cm hydrosalpinx, the left ovary with a 3 by 4 cm endometrioma, and many adhesions to the uterus, sigmoid colon, and ileal loops. Unexpectedly, we also discovered a 10 cm cystic mass located retroperitoneally, which extended caudally to the pouch of Douglas and cranially to the aortic bifurcation. Due to the tumor location (proximity of large vessels) and important peritumoral adhesions, the intervention of a general surgeon was required. A laparotomy was performed and the mesenteric cyst was identified with cranial mesosigmoid and ileal adhesions, as well as distal adhesions which included the uterus, ileal loops, left ovarian endometrioma, left hydrosalpinx, left ureter, and rectum (Fig. 3-Laparoscopic images of the cyst and Figure 4-The laparotomy findings). Although difficult, the cyst was completely removed without intestinal of ureteric injury. In view of the extensive adhesions and difficult dissection, left adnexectomy was necessary. The patient's outcome was favorable, with discharge at 72 hours after surgery. The histopathological report revealed the unusual finding of both

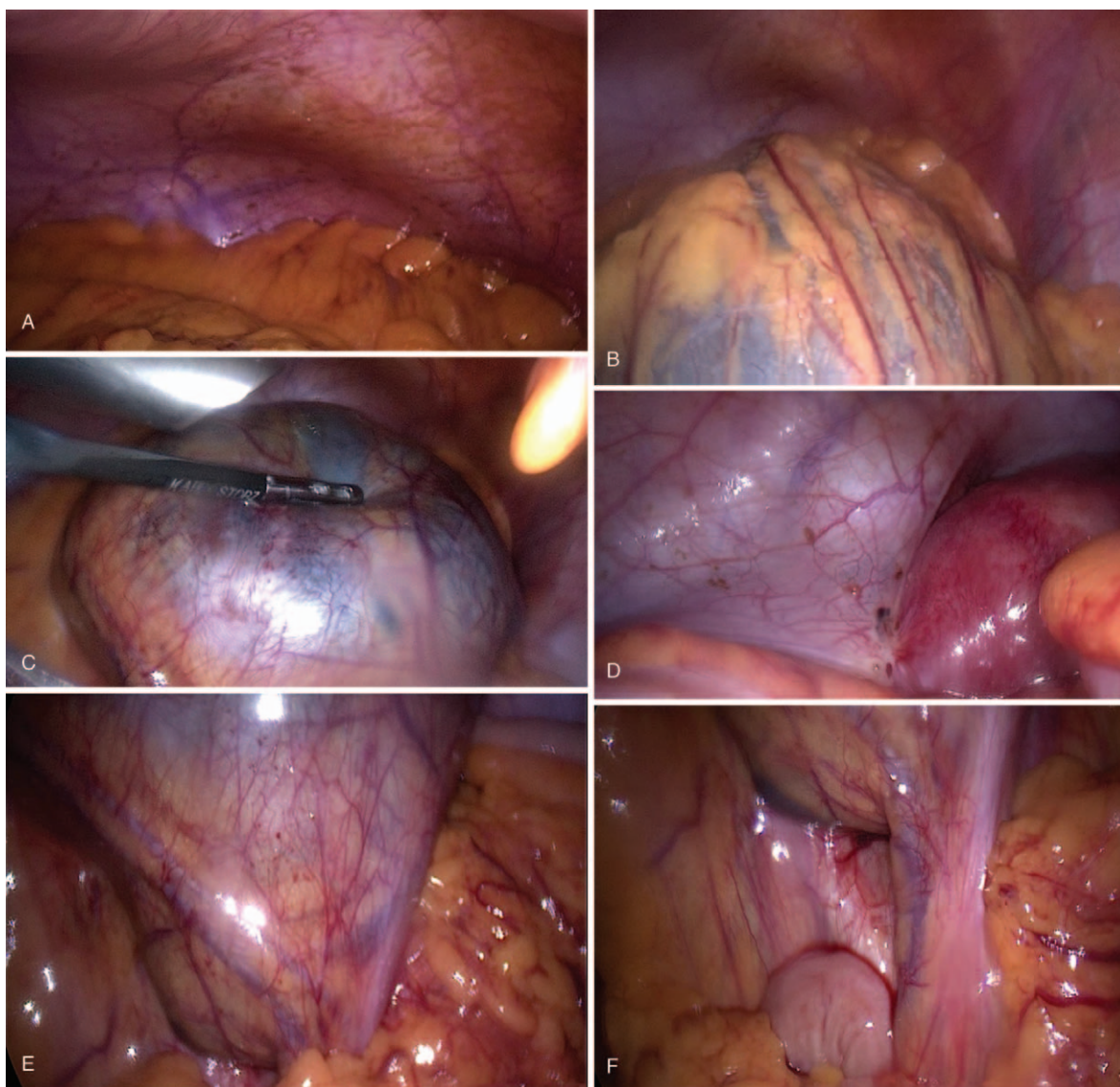


Figure 3. (A, B, C, D, E, and F) Laparoscopic aspect.

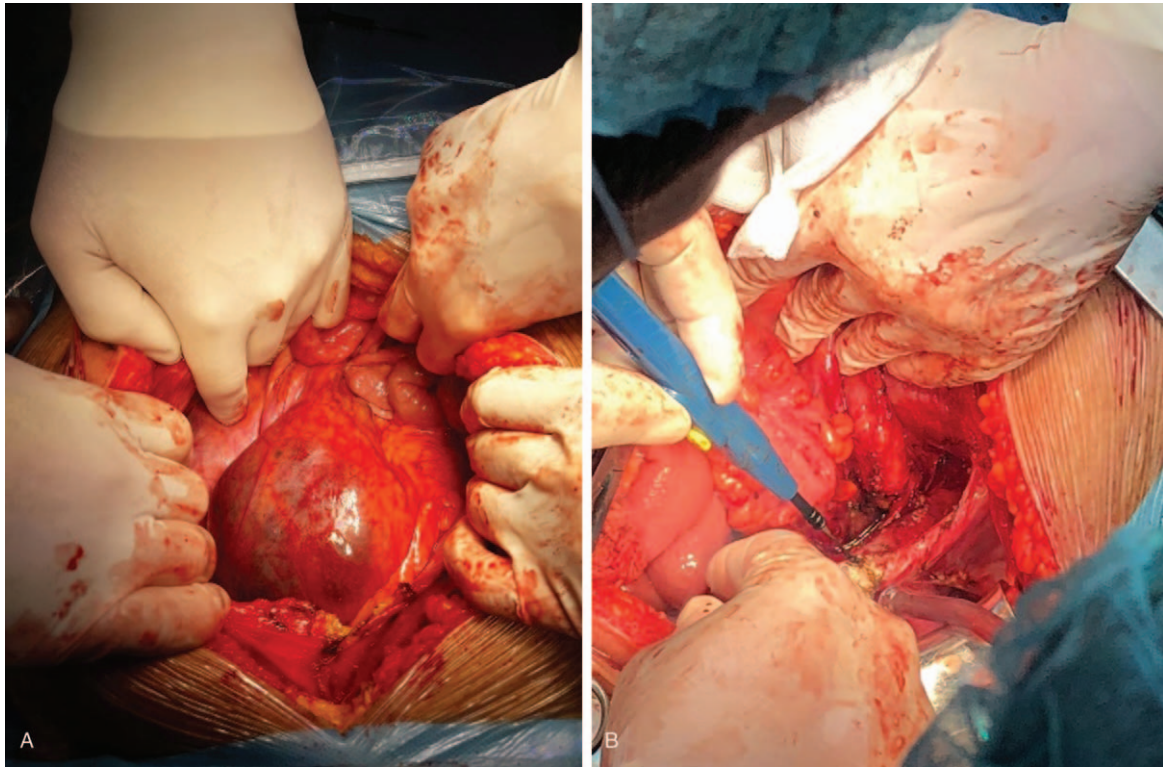


Figure 4. Laparotomy cystic mass removal (A and B).

mesenteric and ovarian endometriomas. Microscopic evaluation identified ovarian and mesenteric cysts with pericyclic fibrosis, intracyclic hemorrhage, hemosiderin, and diffuse lymphocytic inflammatory process, fibroadipose cystic fragments with cubic flattened and ulcerated epithelium, vascular stasis, and pleomorphic inflammatory process (Fig. 5-The pathology images of the endometrioma). The following 10 months after surgical intervention were without complications for the patient.

3. Discussion

The case we report raises several points for discussion. First, there was discordance between the patient's symptoms and the clinical findings. This 29-year-old woman had no clinical symptoms apart from primary infertility for 3 years. Even though ultrasound examination is considered the first imaging modality^[11] for ovarian endometriosis, we also recommend MRI examination. The MRI result was in concordance with the ultrasound finding of endometriomas. However, the accuracy of the ultrasound examination was better than that of the MRI which did not mention the hydrosalpinx.

In our country, there are no guidelines regarding endometriosis. In order to exclude the risk of malignancy, we recommended Cancer Antigen 125 (CA 125) and ROMA score for this patient. Because the results were in the normal range, we decided to perform an exploratory laparoscopy to assess the endometriomas and to check tubal patency. The patient was informed about the complexity of the disease even in asymptomatic patients. She understood that the clinical and imaging examinations were limited and that the laparoscopy could reveal the extent of involvement of other abdominal organs besides the ovaries. The

patient signed informed consent for laparoscopy and laparotomy if necessary.

In our case, the laparoscopy confirmed the diagnosis of ovarian and peritoneal endometriosis. The unusual element was that the largest endometrioma was a mesenteric cyst. Mesenteric cysts are rare, benign gastrointestinal cystic lesions with no classical clinical features.^[11] They are more common in women than in men, with a 2:1 ratio.^[12] The color, consistency and adhesions to the sigmoid, ileal loops, and left ureter observed during laparotomy sustained the clinical diagnosis of mesenteric endometrioma.

Endometriosis is a pathology defined as the presence of functional endometrial glands and stroma outside the uterine cavity. The most common locations for the ectopic endometrial implants are the ovaries, the fossa ovarica, and the uterosacral ligaments. Endometriosis is classified into 4 stages based on the severity, amount, location, depth, and size of growths: stage I (minimal), stage II (mild), stage III (moderate), and stage IV (severe).^[13] In our case, exploratory laparoscopy established stage IV endometriosis. Despite its typical symptoms such as abdominopelvic pain, dysmenorrhea, menometrorrhagia, dyspareunia, dyschezia, and dysuria, one-third of women of reproductive age remain asymptomatic.^[14,15] The treatment of choice for endometriosis is complete surgical excision, which may be performed by a laparoscopic approach.^[16] The second major discussion point related to our case is that the clinical and imaging examinations did not make the diagnosis of a mesenteric endometrioma. The explanation may be that the mesenteric cyst had a long pedicle and the adhesions to the left abdominal wall (especially to the sigmoid colon) resulted in the diagnosis of a left ovarian endometrioma.

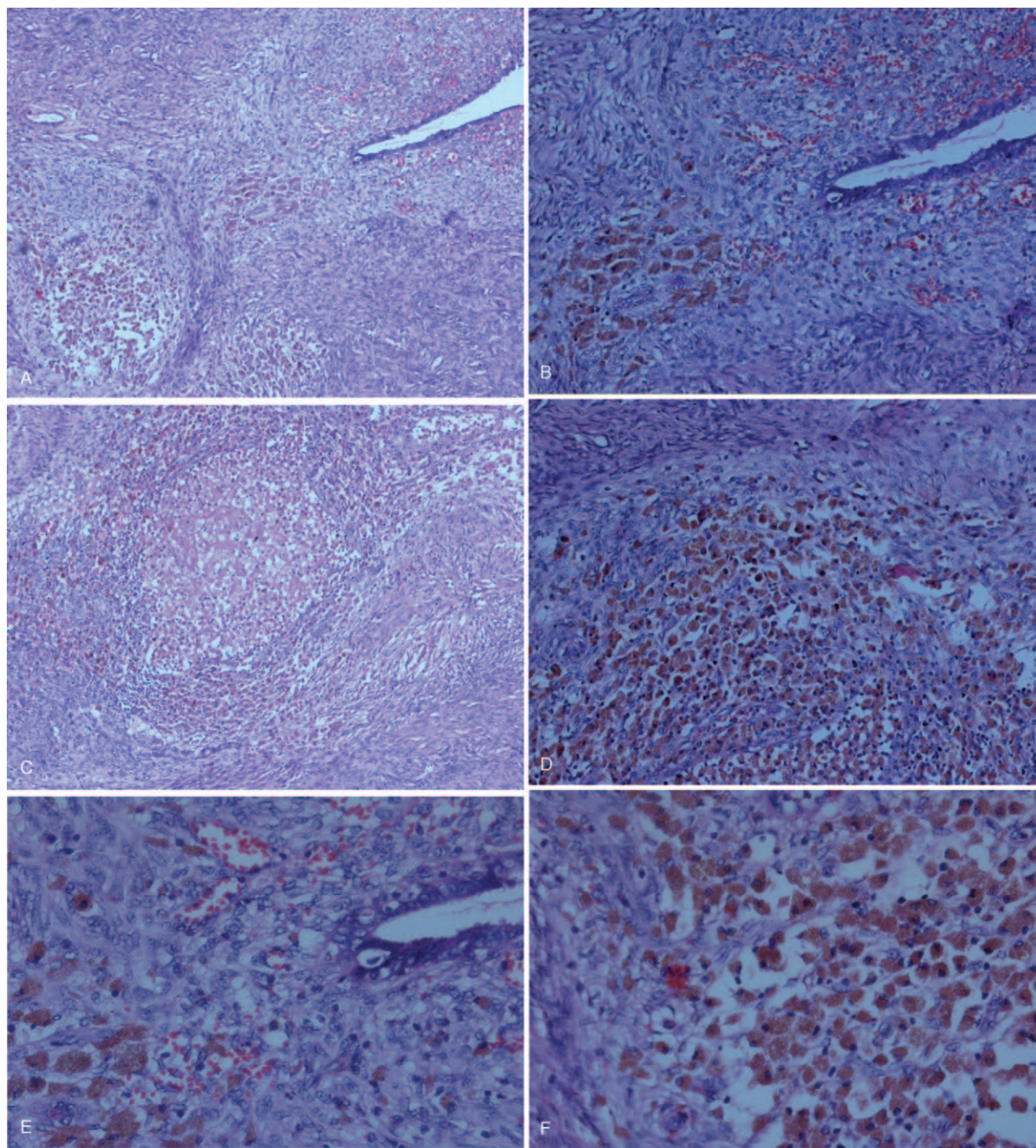


Figure 5. Pathological aspect (A, B, C, D, E, and F).

Another issue raised by our case, related to the development of the mesenteric endometrial cyst, is that of which theory of endometriosis might account for this endometrioma? Paradoxically, the cyst had a retroperitoneal evolution while the majority of endometrial cysts are intraperitoneal. Many authors have tried to highlight the origin of extraperitoneal endometriosis.^[17,18] The celomic theory would explain the unusual location of endometriosis in this case, caused by the origin of uterine tissue from the mesenchyme of the celomic wall.^[19] A correct explanation of the pathology of mesenteric endometrial cysts may only be possible after publication of many similar cases and possibly with detailed molecular studies.

The unusual element of our case is the identification of a mesenteric cyst in a patient with no clinical symptoms, and the fact that pathological examination revealed the endometriotic origin of the mesenteric cyst which has not been reported in the literature to date.

Author contributions

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