

Large Endometriotic Cyst-Masquerading as Ovarian Malignancy

Abstract

Endometriosis usually affects premenopausal females. Its pathogenesis is not completely understood. The presence of functioning endometrial glands and stroma outside the uterine cavity is known as endometriosis. Endometriosis can be found in both ovaries, the pouch of Douglas, pelvic peritoneum, and uterosacral ligaments. Cystic forms of endometriosis can occasionally present as a huge abdominal mass, mimicking ovarian malignancy. Hereby, we present one such case of a large endometriotic cyst in a pre-menopausal female. She underwent surgery, and the histopathology, along with immunohistochemical examination, proved it to be a case of endometriotic cyst. Although this diagnosis is relatively rare, this should be considered as a differential diagnosis in the case of cystic lesions in premenopausal females.

Keywords: Endometriosis, endometriotic cyst, immunohistochemistry

Introduction

Endometriosis is a common and benign condition. It affects approximately 10% of premenopausal women.^[1] The pathogenesis of endometriosis is complicated and has not yet been fully explained.^[2] The various sites of endometriosis include both ovaries, the pouch of Douglas, pelvic peritoneum, and uterosacral ligaments. This phenomenon complies with the theory of menstruation back-flow and implantation of endometrial tissue.^[3]

Endometriotic cysts are cystic form of endometriosis. These cysts may or may not be associated with endometriosis in other sites. Usually, this condition is seen in females in their 4th-5th decades of life. Clinically, they present with pain abdomen. The endometriotic cyst can be large in size with irregular lining and with areas of hemorrhage.^[4]

Case Report

A 37-year-old female, P2 L2 presented with the clinical history of gradual swelling of abdomen and loss of appetite for 5 months. She had no history of surgery, including cesarean section. Ultrasonography was reported as left ovarian malignancy. Her CA-125 level was 116 U/ml (<35 U/ml). Computed tomography imaging showed a large abdominopelvic cystic lesion with

multiple internal enhancing septations. The cyst was displacing the uterus posteriorly and bowel loops superiorly. Bilateral ovaries were seen separately [Figure 1a and b]. She underwent laparoscopic debulking of the tumor along with hysterectomy and bilateral salpingo-oophorectomy. Intraoperatively, there was a large cystic lesion covering the whole of the abdominal cavity, densely adhered to mesentery. Grossly, the cyst was measuring 20 cm × 17 cm and was attached to the left ovary, left fallopian tube, and posterior aspect of the uterine wall [Figure 1c].

Histopathology of the cyst showed many endometrial glands lined by cuboidal epithelium surrounded by a rim of the compact endometrial stroma [Figure 1d]. The rest of the stroma was edematous. Immunohistochemistry done with CD10 and progesterone receptor (PR) highlighted the endometrial stroma. The glandular lining was positive for CK7 [Figure 1e and f]. The final diagnosis given was endometriotic cyst. There were no areas of necrosis or increased mitotic activity.

She had an uneventful postoperative period.

Discussion

By definition, the presence of functioning endometrial glands and stroma outside the uterine cavity is known as endometriosis. The diagnostic criteria of endometriosis

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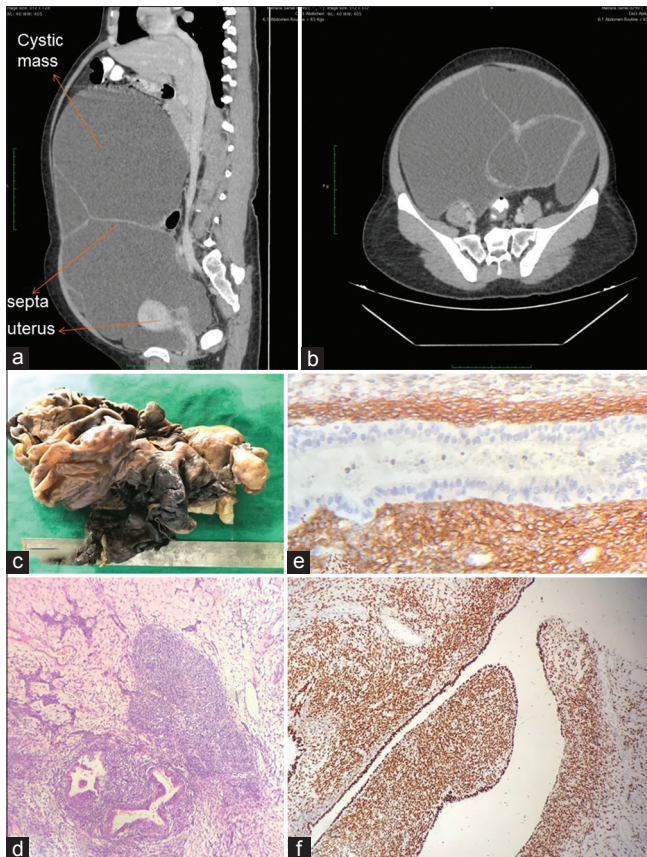


Figure 1: (a and b) Computed tomography imaging of a large abdomino-pelvic cystic lesion with multiple internal enhancing septations. (c) Gross of huge cyst attached to left ovary, left fallopian tube and posterior aspect of the uterine wall. (d) Histopathology showing endometrial glands and stroma (H and E, $\times 200$). (e) Immunohistochemistry showing cytoplasmic positivity for CD10 in endometrial stroma (immunohistochemistry, $\times 400$). (f) Immunohistochemistry showing nuclear positivity for progesterone receptor in endometrial glands and stroma (immunohistochemistry, $\times 100$)

include the presence of two of the following three features outside of the uterus: endometrial glands, endometrial stroma, and hemosiderin-laden macrophages. Endometriosis is a fairly common condition. It is estimated to affect approximately 6%–10% of the reproductive age group females.^[1] The macroscopic indicators of the endometriosis can manifest themselves in various ways such as a few petechial, vesicular, hemorrhagic, powder-like implants or serous or clear vesicular structures or intraperitoneal adhesions attached to both ovaries, the pouch of Douglas, and uterosacral ligaments. In 40%–60% of the patients, endometriosis is accompanied by ovarian endometrioma.^[2]

The exact cause and pathogenesis of endometriosis are not clear. There are several theories regarding the pathogenesis of endometriosis. One theory suggests that through retrograde menstruation, viable endometrial cells are transported to the peritoneal cavity. Another theory is that of transtubal dissemination of endometrial tissue, which is also considered as the most common route of spread. One more theory is the iatrogenic deposition of endometrial

tissue following any gynecological surgery and cesarean sections.^[1] Our patient did not have any such history.

Goumenou *et al.* have described a case of endometriosis-associated with massive ascites, pleural effusion, and extremely elevated CA-125 mimicking advanced ovarian cancer.^[5] The patient did not have ascites or pleural effusion. In the case of endometriosis, the frozen-section analysis should be performed during the surgery to rule out the possibility of malignancy associated with endometriosis.^[3] However, in the present case, the intraoperative frozen section was not performed.

In our case, the findings suggestive of malignancy were the size, which was huge, measuring 20 cm. The level of CA-125 was elevated. It was attached to the left ovary, left fallopian tube, and posterior aspect of the uterine wall. The presence of endometrial glands and stroma along with immunochemistry, which showed CD10 and PR positivity in the endometrial stroma and CK7 positivity in the endometrial gland, established the diagnosis of the endometriotic cyst.

Endometriotic cyst in retroperitoneal location is rare, and only a few cases have been reported in the English literature.^[6-9] Recently, Pang *et al.* have described a case of mass-like endometriosis on the surface of the uterus mimicking ovarian malignancy.^[3]

Very rarely endometrioid adenocarcinoma can arise from endometriosis.^[10] The present case is a benign one of the endometriotic cyst.

Conclusion

Although relatively rare in retroperitoneal location, a diagnosis of endometriotic cyst should be considered in the differential diagnosis of cysts in premenopausal women. In our case, the histopathological diagnosis of the endometriotic cyst was confirmed with the immunohistochemical staining.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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