

Huge endometriosis presenting like an ovarian tumor: CT appearance

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Summary

A 32-year-old female with a clinical history of abdominal swelling underwent CT of the abdomen. A huge biloculated cystic mass with a mural nodule in the abdominal and pelvic region was seen. The lesion showed slightly homogeneous enhancement. The imaging findings suggested an ovarian tumor. Histopathological evaluation after surgical resection revealed that the lesion was a bilateral ovarian endometriosis.

Key words: Endometriosis; Computed tomography; Ovarian diseases.

Introduction

Endometriosis is an extrauterine growth of the endometrial tissue. The ovaries, cul-de-sac, posterior broad ligament and uterosacral ligament are the most common sites affected [1]. The gastrointestinal system, abdominal wall, liver and chest can also be involved [2-7]. Reported computed tomography (CT) findings of endometriosis include mostly well-defined cystic masses several centimeters in size [1, 7, 8]. In this case report, we present a case of rare giant bilateral ovarian endometriosis with a mural nodule which was located in the pelvic and abdominal region extending to the liver and gall bladder, suggestive of an ovarian tumor.

Case Report

A 32-year-old female with a 6-week clinical history of abdominal swelling underwent CT of the abdomen. There was no history of pelvic surgery, dysmenorrhea or pelvic inflammatory disease. Her hemoglobin level was 9.16 g/dl, hematocrit 27.8% and sedimentation rate 78 mm/hour. CA 125 was 57.2 u/ml, CA 15-3 29.33 u/ml, CA 19-9 52.11 u/ml, and CEA 2.2 ng/ml. Her other laboratory findings were unremarkable.

A CT scan using 8-mm slices was performed with a spiral CT unit (Somatom Balance; Siemens, Erlangen, Germany). CT of the abdomen and pelvis following intravenous contrast application revealed a slightly homogeneously enhancing biloculated cystic mass with thin walls. The mass, across the midline, measured 20 x 20 x 18 cm within the abdominal and pelvic region with extension to the inferior aspect of the liver and gall bladder and superior aspect of the left and right ovary (Figure 1a, b). The mural nodule was observed at the anterior wall of the right cystic mass (Figure 1c). There was neither ascites nor lymphadenopathy. The CT features of the lesion were mostly consistent with tumor of the ovary. The uterus was normal.

At surgery, a soft cystic lesion originating from the right ovary about 20 cm in diameter and a cystic lesion originating from the left ovary about 10 cm in diameter were determined. Cystic lesions were attached to each other in the posterior level of the uterus. Right salpingo-oophorectomy with endometrioma excision and left endometrioma excision were done. Histologic examination of both the cystic masses showed areas of endometrial surface epithelium and endometrial stroma together with common hemorrhagic areas at the cyst wall (Figure 1d) and the diagnosis was bilateral ovarian endometriosis.

Discussion

Endometriosis is an ectopic collection of endometrial tissue. Symptoms regarding endometriosis are mostly pelvic pain and infertility. It has been reported that ectopic endometrium often behaves unpredictably, which makes the diagnosis difficult. Treatment for endometriosis can be medical or surgical depending on the severity of symptoms [1].

Endometriosis has no pathognomonic finding at ultrasonography, CT or magnetic resonance imaging (MRI). The main role of CT and MRI is to determine the extent of the lesions [3, 4]. Endometriomas can be unilocular or multilocular with thin or thick septations. Reported CT findings of endometriosis include mostly well-defined cystic masses that are several centimeters in size. They rarely exceed 15 cm in diameter [1, 9]. Malignancy should be ruled out in large lesions with wall nodularity [1]. In our case, endometriosis had developed as a slowly enlarging mass and it exceeded 20 cm in diameter. The lesion extended to the inferior aspect of the liver and gall bladder in the superior region and the uterus and left ovary in the inferior region.

Malignant transformation, which is a fatal complication of endometriosis, is rarely reported [1, 5]. Endometrioid carcinoma is the most common neoplasm arising from endometriosis [1]. The most important finding for a diagnosis of malignant changes in endometriosis is a contrast-enhanced mural nodule at the wall of the lesion [8].

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Fig. 1a

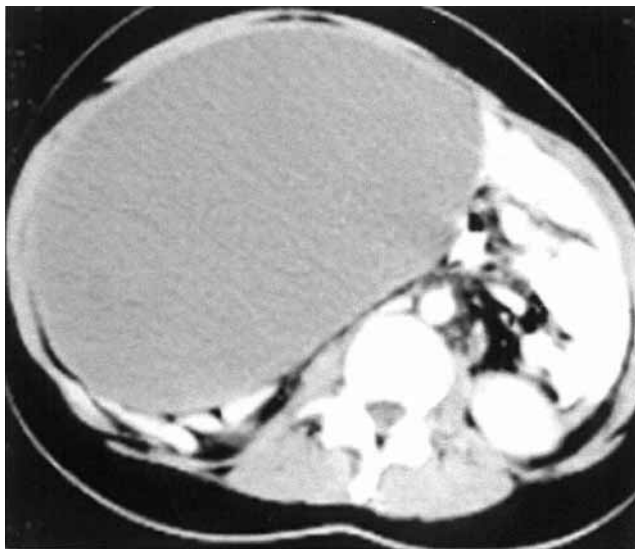


Fig. 1c



Fig. 1b



Fig. 1d

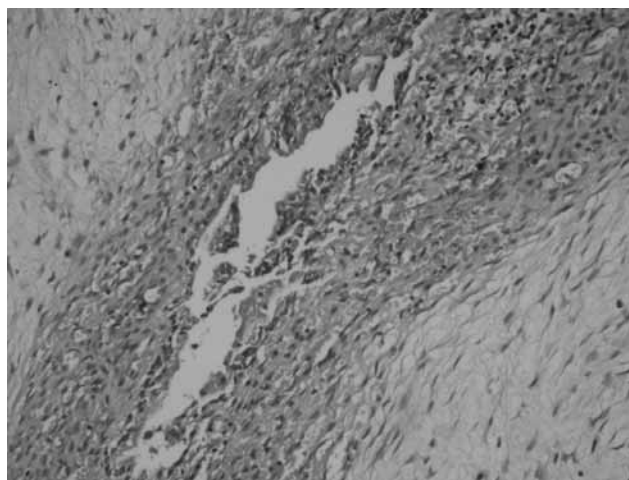


Figure 1. — Axial CT image showing a giant thin-walled cystic mass (a). Coronal reformatted image showing a bilocular cystic lesion in the abdominal and pelvic region (b). Axial CT image showing a bilocular cystic mass with mural nodule (arrows) (c). Histological section of the lesion showing surface epithelium in the stroma of the endometrium (H&E, $\times 200$) (d).

However, decidual changes such as hypertrophy of the stromal cells of ectopic endometrial tissue can form as mural nodule and mimic malignant transformation or solid component of the ovarian tumor [8]. The differentiation of a malignant mural nodule and decidualized endometrial changes are not possible by any imaging modality [8]. In our case, there was the mural nodule at the lesion wall, however the histopathological evaluation determined the absence of malignancy.

The most common giant cystic masses of the abdominopelvic region in the reproductive age group are epithelial tumors originating from the ovary, such as serous and mucinous tumors. Thin regular walls or septa, absence of invasion, homogeneous CT attenuation or MRI signal intensity, and a diameter less than 4 cm are common features of benign ovarian cystadenomas [10]. The internal solid components are usually absent in benign cystadenomas, but if present, they are mostly

small. Mucinous cystadenoma tends to be larger than serous cystadenoma during the diagnosis. Thick-irregular walls and septa and a large solid component are suggestive features of malignant epithelial ovarian tumors [10]. Hemorrhagic cysts should be also included in the differential diagnosis. Hemorrhagic cysts may have a complex appearance due to fibrin strands and resolve in a few weeks on follow-up examination [1].

In summary, the CT findings of a rare giant endometriosis that developed as a slowly enlarging mass have been described. Endometriosis should be considered in the differential diagnosis of giant cystic masses with a mural nodule located in the abdominopelvic region.

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