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Voluminous endometrioma in a postmenopausal woman without previous hormonal therapy. Case report

Abstract

Endometriosis, representing endometrial-like tissue located outside the uterus, is a commonly occurring benign gynecologic disease in approximately 6% to 10% of fertile woman. Postmenopausal endometriosis has a rare occurrence, because the absence of oestrogenic hormone production should arrest disease progression due to the fact that endometriosis is considered an oestrogen-dependent condition, but still does occurs in 2%-5% of postmenopausal women. The majority of the cases reported were under hormone replacement therapy. We present a case of voluminous ovarian endometriosis in a 54-year-old postmenopausal obese. Caucasian woman without previous use of hormonal therapy and without history of endometriosis or infertility at her reproductive age. We can speculate that obesity is a possible risk factor for postmenopausal endometriosis, or that the celomic metaplasia theory can be applied on this case.

Keywords: *ovarian endometriotic cyst, post menopause, celomic metaplasia*

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Introduction

Endometriosis, representing endometrial-like tissue located outside the uterus, is a frequent benign, chronic gynaecological pathology that associates pelvic ache and infertility.

The prevalence of this pathology is high, occurring in 6% to 10% of fertile age women[(1)]. Postmenopausal endometriosis has a rare occurrence, because the cessation in oestrogenic hormone production should prevent estrogen-dependent endometriosis[(2)]. Although endometriosis has been correlated with menstrual cycles, and considered an oestrogen-dependent condition, it can touch between 2% to 5% of postmenopausal women[(3)], and mainly manifest as a side effect to hormone replacement therapy[(4,5)].

Because the ovarian site in endometriosis is the most common, postmenopausal endometriosis have a 1% risk of malignant transformation, and associates an increased risk for ovarian cancer[(6)]. Most often, an abdominal or pelvic mass is the only clinical finding before surgery, and nearly all literature reported cases were retrospectively diagnosed by anatomo-pathological exams. The real prevalence of postmenopausal endometriosis is obscure[(7)].

We consider postmenopausal endometriosis an important theme to debate about due to recurrence and malignant transformation risk, therefore we present a case of voluminous ovarian endometriosis in a 54-year-old postmenopausal obese caucasian woman without previous use of hormonal therapy and without history of endometriosis or infertility at her reproductive age.

Case Report

We report the case of a 54-year-old, G4P2, postmenopausal, obese caucasian woman admitted in our clinic for acyclical pelvic pain and abdominal pressure. The patient's gynaecological history was normal with menarche at 13 years old and her menopause at 49, without pelvic ache or dysmenorrhoea at her fertile age. She declined any current or previous use of hormone therapy, and had no family or personal case history of endometriosis or infertility. General physical exam expose an obese patient, hemodynamic stabile with a voluminous, tense abdominal tumor mass occupying the abdomen up to the umbilicus.

The pelvic ultrasound scan traced a right ovarian homogeneous cystic mass with diffuse, low-level echoes with some punctuate echogenicities in the walls of approximately 22.4 × 20 × 20 cm in size (Figure 1). The Doppler waveform analysis showed low-resistance waveforms, image which raised the suspicion of a malignancy. The tumoral markers (i.e. cancer antigen 125, carcino-embryonic antigen) were negative. The clinical and paraclinical dates suggested a provisional diagnosis of right benign ovarian tumor and a laparatomy was decided.

Laparatomy revealed a cystic tense right adnexal mass of 23×20×20 cm in size, adhesions between the omentum and the anterior abdominal wall, between the cyst walls and the sigmoid colon, rectum and lumbo-ovarian ligament (Figure 2). On mobilization the anterior cyst wall snapped and a dark brown chocolate like content dripped out suggesting an endometrio-

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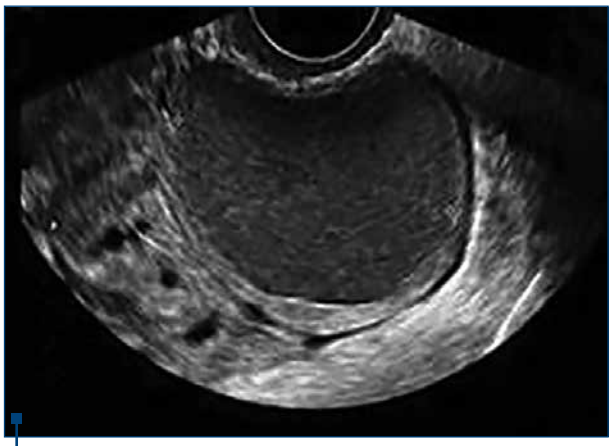

Figure 1. Transvaginal transverse image showing a classic-appearing endometriotic cyst with diffuse low-level internal echoes

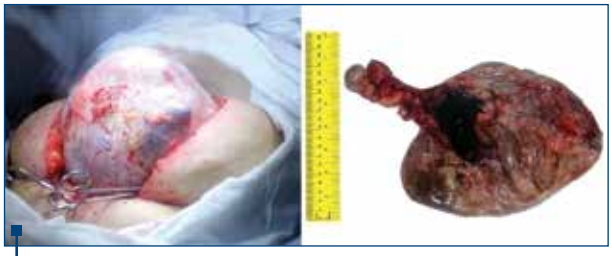

Figure 2. Macroscopic aspect of the ovarian lesion

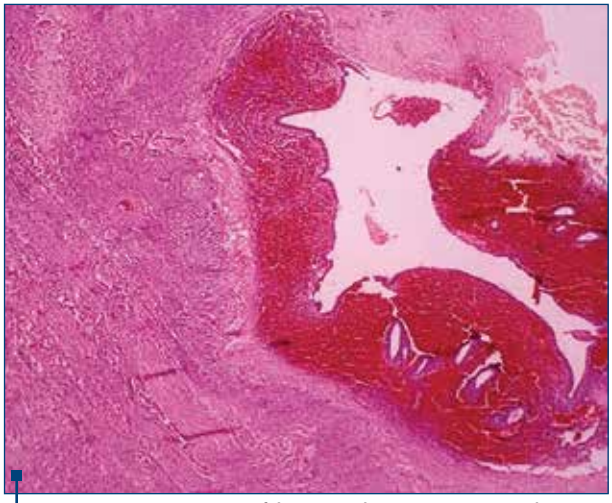

Figure 3. Microscopic aspect of the ovarian lesion: ovarian parenchyma with cyst walls, endometrial glands with large lumina lined by a layer of columnar cells and with a area of hemorrhage, HE staining, x 40

tic cyst. After removing the tumoral mass abdominal lavage was performed. No other pelvic or abdominal endometriotic lesions were observed. The patient was submitted to total hysterectomy with bilateral salpingo-oophorectomy. The subsequent histological analysis showed microscopic structures similar with endometrial tissue, formed by endometrial glands with large lumina, filled with mucous secretions, lined by a layer of cubic or columnar cells, endometrial stroma with numerous areas of hemorrhage and a network of small arterioles (Figure 3).

Discussion

Endometriosis has long been considered an estrogen-dependent disease. At menopause, estrogens are derived either from exogenous administration such as hormone therapy or endogenous extra-ovarian production including the adrenal glands, endometrial stroma, adipose tissue which provides the largest part of estrogen and the endometriosis lesion itself. Most of the reported cases of postmenopausal endometriosis have been developed in women with previous history of hormone therapy. It is now well established that endometriosis lesion can produced estrogen itself by aromatase and propel its growth in a positive feedback style[7].

Endometriosis is the third leading cause of gynecologic hospitalizations and a common reason for hysterectomy. Although is a rare pathology, it is important to be informed that endometriosis can occur to menopausal women too[8]. Postmenopausal endometriosis induces a risk of recurrence and cancerous transmutation[9].

Endometriosis occurring in post fertile period was first described in 1950[10]. The risk of cancerous transformation of this condition is about 1%. Additionally, this patients associates an elevated risk of ovarian cancer, and apparently, other malignancies too. The risk of cancerous malignant transmutation appears to be further expanded in patients under hormone replacement therapy, although this subject is still controversial[9].

In the presence of adnexal masses in menopausal women, the possibility of a malignant ovarian tumour must be evaluated. Although a rare condition in menopause, endometriosis must be considered a differential diagnose when a pelvic mass is investigated in a post fertile woman[10].The celomic metaplasia etiopathogenic mechanism[11,12] can be achieved and can explain the ovarian endometriosis lesions.

Other feasible explanation is that some endometrial stem cells from vascular torrent can be implanted. This occurs when endometriosis lesions are found in areas that aren't in contact with the menstrual retrograde flow[13,14]. The immunity status can also play a role in the pathophysiology, allowing ectopic implantation of endometrial like tissue. Interleukin (IL) 1, IL2, IL6, IL8, IL10, tumor necrosis factor alpha, interferon gamma, monocyte chemotactic protein-1 are molecules correlated with implantation and growth of endometriosis implants. A relative immunosuppressant status in post fertile period can allow establishment growth of the endometriotic lesions[15]. Otherwise, during menopause estrogen is produced mostly in the skin and adipose tissue.

Obese menopausal women can produce much more endogenous estrogen than non-obese women, which may result in elevated serum estradiol levels[16]. Rosa-e-Silva et al.[17] showed that obesity may have a particular

role in the expansion of post-menopausal endometriosis lesions due to the overplus of estrogen production by the adipocites. Although is a rare pathology, it is important to be investigate it[9].

Postmenopausal endometriosis have a risk of re-occurrence or cancerous transmutation. In some cases may be taken into consideration the risk of clear cell and endometrioid ovarian cancers. The reported incidence of cancerous transformation is about 0.7-1.0%[18]. An ovarian mass larger than 9 cm is a strong predictor for ovarian cancer in women of 45 years of age or older[19,20,21].

Conclusions

Postmenopausal endometriosis represents a differential diagnosis to exclude cancer in postmenopausal women diagnosed with critical adnexal masses.

Surgery should be the first step in the management of ovarian masses because of the increased malignant potential of abdominal and pelvic masses and possibility of malignant transformation.

Hormone therapy should generally be offered for patients with severe menopausal accuses, and when indicated, combined therapy should be used, due to the correlation with malignancies.

The particularity of the case presented consist in the big dimensions of the endometriotic cyst at a postmenopausal woman without a history of hormone replacement therapy or history of endometriosis or infertility on her child-bearing age. In this case, the role of obesity in the growth of the postmenopausal endometriosis due to estrogen production by the adipocites can be easily speculated as well as the celomic metaplasia theory for the genesis of the disease. ■

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