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To cite this article: B. Suchońska, M. Gajewska, A. Zygula & M. Wielgoś (2017): Endometriosis resembling endometrial cancer in a postmenopausal patient, *Climacteric*, DOI: [10.1080/13697137.2017.1398229](https://doi.org/10.1080/13697137.2017.1398229)

To link to this article: <https://doi.org/10.1080/13697137.2017.1398229>



Published online: 23 Nov 2017.



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CASE REPORT



Endometriosis resembling endometrial cancer in a postmenopausal patient

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ABSTRACT

Endometriosis occurs in 2–4% of postmenopausal women. There have been a few reports of endometriosis in women in whom neither history nor diagnostic imaging indicated the presence of this disease, either at reproductive age or after menopause. A case is described of an 84-year-old patient with extensive deep pelvic endometriosis imitating advanced neoplastic process.

ARTICLE HISTORY

Received 21 October 2017
Accepted 24 October 2017
Published online 23 November 2017

KEYWORDS

Endometriosis; menopause; malignancy; hormone replacement therapy; endometriotic lesion; surgery

Introduction

Endometriosis is a benign, hormone-dependent disease characterized by the occurrence of endometrial tissue outside of the uterine cavity¹. It is most often diagnosed in patients of reproductive age, and most studies of endometriosis concern this age group. Because the presence of endometriosis lesions and the associated symptoms depend on the activity of the ovaries, they usually resolve after menopause, and the prevalence of endometriosis in this age group is 2–4%^{2,3}. There have been a few reports of endometriosis in women in whom neither history nor diagnostic imaging indicated the presence of this disease at reproductive age^{1,3}. The occurrence or progression of endometriosis lesions in older women may be associated with the production of estrogen by adipose tissue or its exogenous supply (e.g. hormonal replacement therapy)^{2,4,5}.

The main method of treatment of postmenopausal endometriosis is a surgical procedure with optimal cytoreduction⁶. An important issue associated with endometriosis is its potential to serve as a medium for the development of malignancy^{7,8}. Endometriosis is found in 35.9% of women diagnosed with ovarian clear cell carcinoma and in 19% of patients with endometrial cancer⁷. The causal factor here is the imbalance in the cytokine environment and an increase in the concentration of proangiogenic and prometotic cytokines⁷.

This paper presents the case of an 84-year-old patient with advanced deep pelvic endometriosis in whom neither preoperational diagnostic imaging results nor intraoperational observation suggested the presence of an advanced neoplastic process in the reproductive organs.

Case study

An 84-year-old patient presented to the Gynaecological Surgery Outpatient Clinic of the I Gynaecology and Obstetrics Clinic at Warsaw Medical University in July 2016 with a pelvic tumor detected by diagnostic imaging. One week earlier, she had been admitted to the Internal Medicine Ward due to a low-grade fever and abdominal pain accompanied by vomiting and oliguria, and followed by urinary retention. The symptoms had been getting progressively worse for the previous 4 weeks. Ultrasound examination of the abdomen demonstrated a bilaterally dilated pyelocalyceal system, to 22 mm, and a urinary bladder under external pressure from a solid lesion. Noteworthy laboratory results included creatinine 7.1 mg%, increased inflammatory parameters (C-reactive protein 261 mg/dl, white blood cell count 12000) and pyuria. Her history showed two vaginal deliveries, and her last menstruation was at 50 years of age. The patient was chronically treated for arterial hypertension and paroxysmal atrial fibrillation. A Foley catheter was found in the bladder upon admission. Gynecological examination revealed a clear ectocervix and a small cervix. The uterine body was of normal size and poorly movable. On the right side, in tight contact with the uterus, there was an oval, cohesive structure of 10 cm in diameter. On the left side, the adnexa was not palpable. Per rectum, there was no resistance within the range of the examining finger. Vaginal ultrasound examination showed a uterine body, size 30 × 33 mm; just next to it, on the right side, was an 86 × 68 mm lesion filled with dense content. On the projection of the adnexa on the left side, there were no abnormal reflections. There was no free fluid.

After cardiologic and anesthetic consultations, the patient was qualified for surgical treatment. When the abdominal cavity was opened, the following were observed: a uterine body of normal size 4 × 3 cm, poorly movable in tight contact with an unmovable, retroperitoneal tumor of 10 cm in diameter on the right side. The ovaries and Fallopian tubes on both sides had no macroscopic lesions; the pelvic and abdominal peritoneum was smooth. The organs of the abdomen were unchanged on palpation. After opening the retroperitoneal space, the tumor cavity was also opened and purulent matter spilled out and was collected for culture. Infiltration of the right parametrium was observed, pulling on the urinary bladder and urethra. The urethra was exposed and the infiltrations in the uterus and adnexa – including the right parametrium – were removed. In the course of dissection, the urethra and bladder were damaged. Ureteroneocystostomy was performed. Because of the intraoperative picture suggesting endometrial cancer, iliac and obturator lymph nodes were removed bilaterally.

On the 2nd day after the surgery, two units of erythrocyte concentrate were administered due to anemia. Because of the increasing inflammatory parameters, tazocin and metronidazole were introduced, first empirically and then in accordance with an antibiogram. On the 3rd day after the surgery, due to persisting renal failure, the patient was transferred to the intensive care unit. She returned on the 7th day with normalized renal function. On the 11th day after the surgery, when the patient's general condition was stabilized and clinical status improved, the patient was discharged in quite good general condition.

The final histopathological examination report described an intrauterine device in the uterine cavity, fused with the uterine wall. There were intramural fibroids and adenomyosis of the uterine body, simple endometrial hyperplasia without atypia, squamous metaplasia and Nabothian cysts of the cervix. There was chronic inflammation of the adnexa. Both ovaries were atrophic. Both Fallopian tubes were without focal changes. On the surface of the uterine serosa, parametrium, and Fallopian tubes there was material described as bladder area infiltration; among the adhesions of fibrous and adipose tissue, there were foci of cells with light, foamy cytoplasm and slight nuclear atypia (CKAE1/AE3–, CK7–, p63–, S100–, LCA focally +). Additionally, within the foci, there were visible histiocytes, lipophages, siderophages and lymphocytes. The immunohistochemical examinations and the histological picture indicated reactive lesions (inflammatory with the formation of adhesions) which were the endometriosis scar tissue (Figures 1 and 2). No malignant neoplasm was found in the received tissue material.

Discussion

It is estimated that, globally, 80 million women suffer from endometriosis. It is diagnosed in about 8–10% of women of reproductive age⁹. The incidence of endometriosis in postmenopausal women is more difficult to estimate. The factors responsible for the development of hormone-dependent neoplasms in this age group are probably also responsible

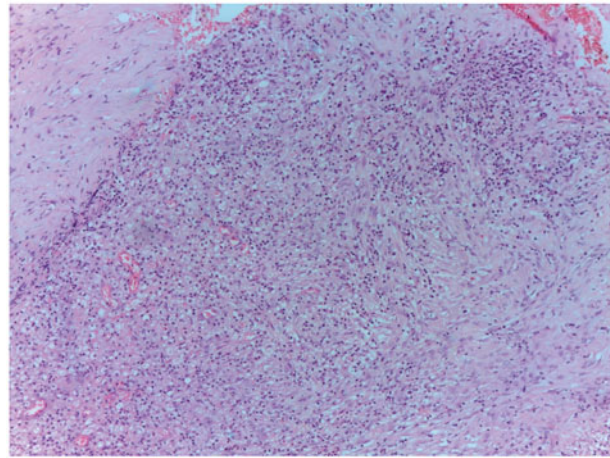


Figure 1. At the center, a visible residual endometriotic focus and, in the left upper corner, a fragment of the myometrium adjacent to the perimetrium.

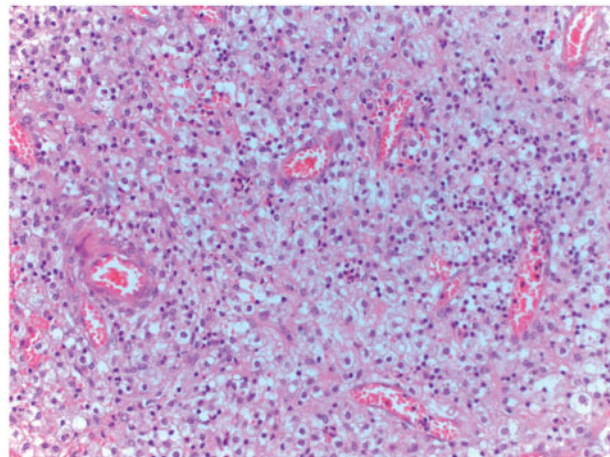


Figure 2. The same photo as in Figure 1 but enlarged 400×.

for the occurrence of endometriosis or, more frequently, the lack of expected regression of the lesions¹⁰. Obesity, as an isolated factor in endometrial cancer development, predisposing to hyperestrogenism, has the most significant impact in postmenopausal women⁸. However, the described patient was thin and did not use hormone replacement therapy^{3,5}. Neither had she reported any pain or had any problems with fertility, which would have suggested endometriosis^{4,11}. Perhaps, in postmenopausal women, the issue is relative immunosuppression, which allows for the occurrence and development of endometriosis lesions¹². A locally reduced immunological response within the pelvic region may also increase the risk of infections¹².

Advanced endometriosis may be the cause of diagnostic errors and incorrect intraoperative evaluation. The presence of infiltration in the parametrium as well as enlarged lymph nodes usually leads to suspicion of a neoplastic process⁷. In this patient, on the basis of the diagnostic imaging performed before surgery, ovarian cancer was suspected. In the course of surgery, a purulent infiltration of the right parametrium was found macroscopically, suggesting the presence of a malignant neoplasm. Agarwal Sharma and colleagues described a case of a 69-year-old postmenopausal woman with the symptoms of ascites, in whom the diagnostic

imaging and intraoperational observation suggested the presence of advanced ovarian cancer¹³. Similarly, Ge and colleagues presented a case of a younger, 42-year-old woman with an ovarian tumor infiltrating the pelvic peritoneum¹⁴. In both women, endometriosis was diagnosed following histopathological examination. Sun and colleagues described 69 cases of endometriosis diagnosed after menopause⁶. In most patients, the picture of the abnormal tissue masses in the pelvis obtained in imaging examinations imitated the reproductive organ neoplasm. Compared to endometriosis occurring at reproductive age, postmenopausal endometriosis lacks the characteristic clinical symptoms of the disease⁶.

It should be noted that, in our patient, endometriosis occurred retroperitoneally. The foci of retroperitoneal endometriosis probably originate on the metaplasia of the Müllerian duct remains¹⁵. In 20% of cases, the urinary system is affected, mostly the distal segments of the urethra and bladder, upstream from the deeper retroperitoneal foci¹⁶. Another theory explains urethral endometriosis as being secondary to the existing endometrial cysts or, more frequently, as the result of endometrial cell implantation laterally in relation to the gonads¹⁷.

Selo-Ojeme and colleagues described a case of a mistakenly interpreted result of a magnetic resonance examination in a patient who had undergone surgery due to cervical cancer. The clinically impalpable bilateral infiltration of the parametrium found in the magnetic resonance examination was described by a histopathologist as endometriosis¹⁸. Klenov and colleagues described a case of a 65-year-old patient with hydronephrosis and renal failure, with a history of hysterectomy and removal of adnexa performed 20 years earlier. The cause of urine retention in the kidneys was urethral stricture resulting from the infiltration of endometriosis not previously diagnosed¹¹.

Another condition which may suggest the suspicion of neoplastic process of the reproductive organs is genitourinary system tuberculosis¹⁹. It most often results from blood spread but direct infection from the abdominal cavity or sexual transmission is also possible. Inflammatory infiltration causes the development of caseous necrosis and tissue disintegration, which suggests the presence of neoplastic process both in diagnostic imaging and intraoperational observation. Yates and colleagues described a patient in whom bilateral ovarian tumors with infiltration of the uterus and peritoneum were observed intraoperationally. Tuberculosis was diagnosed by microscopic examination²⁰.

Similarly, the presence of sarcoidosis may suggest an ongoing neoplastic process²¹. Although involvement of the lungs occurs most frequently, as well as skin, liver and spleen, the presence of sarcoidosis, imitating reproductive organ neoplasm, has also been described in the pelvic region. Coexistence of a malignant neoplasm of the reproductive system and sarcoidosis in lymph nodes may lead to incorrect suspicion of an advanced neoplastic process²². Powell and colleagues described massive sarcoidal involvement of the mediastinal lymph nodes in a patient diagnosed with endometrial cancer recurrence above the vagina²³. A similar situation was the cause of a suspicion of ovarian cancer progression in a 52-year-old patient in the 3rd degree of

advancement 4 months after the completion of chemotherapy²⁴. Cases of ovarian tumor, ascites, increased CA 125 values and enlarged lymph nodes were described in women who were eventually diagnosed with sarcoidosis^{25–27}.

In conclusion, it should be kept in mind that significant suspicion of a malignant neoplasm of the reproductive system, based on the results of gynecological examination as well as diagnostic imaging, may also be evoked by benign lesions. It happens that tissue masses imitating neoplastic changes turn out to be the effect of long-lasting specific or non-specific inflammatory process or endometriosis. It is also possible in a group of postmenopausal patients, in whom the probability of the occurrence of neoplasms is much higher than of inflammatory changes.

Acknowledgements

Many thanks to Dr Michał Ostrowski from the Histopathological Laboratory of Alab Laboratoria for providing photos of histopathological preparations.

Conflict of interest The authors report no conflict of interest. The authors alone are responsible for the content and writing of this paper.

Source of funding Nil.

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