Leiomyosarcoma of the uterine corpus with ovarian metastases in a 28-year-old woman: case report

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Summary

A case of invasive leiomyosarcoma of the uterine corpus with right ovarian metastases in a 28-year-old woman is presented. The patient was submitted to surgery including total abdominal hysterectomy with left salpingo-oophorectomy, dissection of the pelvic and paraaortal lymph nodes and fixation of the right ovary to the psoas muscle. Postoperative radiation therapy was applied. A year after treatment, the patient was well.

Key words: Leiomyosarcoma uteri; Ovarian metastases; Hysterectomy.

Introduction

Sarcoma of the uterine corpus is a rare malignant tumor of the female genital tract. It accounts for less than 1% of all gynecological malignancies and 2-5% of all uterine malignancies [1]. The most common histological types of uterine sarcoma are: carcinosarcoma in 50%, leiomyosarcoma in 30% and endometrial stromal sarcoma in 15% of cases [2]. The incidence of this sarcoma in America is about 0.67 per 100,000 women [3]. The incidence of sarcomatous alterations in benign uterine leiomyoma is between 0.13 and 0.81% [4]. The average age of women with leiomyosarcoma ranges from 40 to 50 years. Treatment is surgical and involves total abdominal hysterectomy with bilateral salpingo-oophorectomy and pelvic and paraaortal lymphadenectomy and peritoneal lavage [5]. There is a high risk of recurrence so it is not uncommon to also apply postoperative adjuvant chemotherapy and radiation therapy [6]. The prognosis is poor [7]. Patient survival with uterine leiomyosarcoma is between 20 and 63%. It is correlated with the degree of mitotic tumor activity, as well as the disease stage [8].

Case Report

A 28-year-old patient, gravida 0, para 0, presented for gynecological examination due to slight pelvic pain. She had menarche at the age of 12, her menstrual cycles were normal every 28 days and lasting about five days. History data showed that she had had uterine myoma and a right ovarian cyst for three years. Vaginal gynecological examination was performed which revealed an enlarged uterus with posterior wall myoma and right ovarian cystic formation. Ultrasound examination showed the uterus was 10 cm x 8 cm x 6 cm in size, with a posterior uterine intramural myoma 6 cm x 5 cm x 5 cm in size. A cystic formation of 5 cm x 4 cm with hematic contents was found in the right ovary. The left ovary was 3 cm x 2 cm x 1 cm.

Laboratory data showed no abnormality of the complete blood count, serum urea, creatinine, sodium, potassium, calcium and phosphate concentrations. A liver function test was also within normal limits. Lung X-ray, abdominal ultrasound and internal findings were within normal limits. The patient was submitted to laparotomy. Myomectomy and cystectomy were performed an the right ovary.

Histologic examination of the excised tumor mass showed that it was leiomyosarcoma of the uterine corpus with over 10 MF/10 HPF, presumed to be transformed from pre-existing uterine leiomyoma, and the right ovarian endometriotic cyst. A decision was made to reoperate on the patient with radicalization including conservation and transposition of the right ovary. Relaparotomy was performed. Classic total abdomen hysterectomy with left salpingo-oophorectomy was performed together with a right ovarian biopsy. The right ovary was fixed to the psoas muscle. Pelvic and paraaortal lymphadenectomy was performed as well as omental resection. Pelvic and abdominal discharge was taken for cytological analysis. Swabs from the diaphragm and the right and left paracolic area were taken for cytological analysis. The liver, intestines, stomach, spleen and diaphragm were examined and no signs of disease signs were found.

The final histopathological finding was: infiltrating leiomyosarcoma (Figure 1). It primarily infiltrated vascular areas. Metastases of leiomyosarcoma were found in the capsule and cortex of the right ovary (Figure 2). The omentum, pelvic and paraaortal lymph nodes were without malignancy signs. Cytological analysis of the abdominal and pelvic discharge was negative. The final diagnosis was leiomyosarcoma of uterine corpus in Stage III a. The patient underwent postoperative transcutaneous radiation therapy (50 Gy) applied in 25 courses. After therapy the patient was well.

Discussion

Leiomyosarcoma of corpus uteri is a rare malignant tumor of the female genital tract. It is characterized by a high malignancy potential. Out of all histological types of uterine sarcomas, leiomyosarcoma accounts for 42% [9]. It may arise from the uterine myometrium de novo or may be transformed from a pre-existing benign leiomyoma [10]. The risk factors for development of sarcoma of the uterine corpus have not been completely elucidated. Application of radiation therapy in the area of the small pelvis has been considered to have an impact on the

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Figure 1. — Leiomyosarcoma of the uterine corpus.

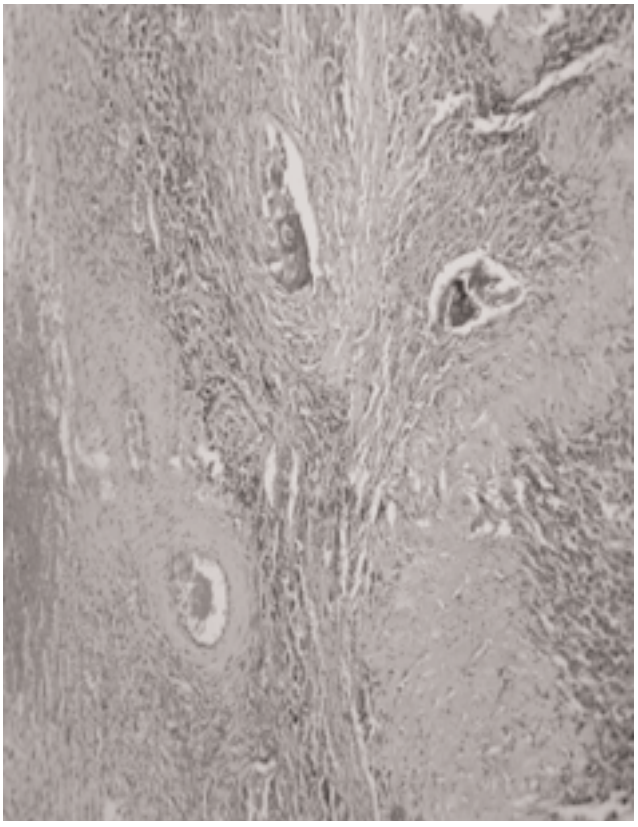

Figure 2. — Metastases of leiomyosarcoma in the ovary

development of carcinosarcoma of the uterine corpus. The average age of women with leiomyosarcoma is 40-50 years. Our patient was 28 years old. She knew that she had already had a uterine myoma for three years. The disease symptoms are not specific and usually include an enlarged uterus, vaginal hemorrhage, and pelvic pain and pressure. Our patient had only pelvic pain out of the above symptoms. A suspected diagnosis of this disease is indicated by rapid uterine enlargement in postmenopausal women.

In about 80% of cases the diagnosis is established upon hysterectomy by histological analysis of the uterine tissue [3]. The diagnosis in our patient was made by histological analysis of the surgically removed uterine tumor mass, since the preoperative diagnosis had been uterine myoma. In establishing the diagnosis of uterine sarcoma, a significant role belongs to exploratory curettage, ultrasonography, magnetic resonance imaging and computed tomography. In about 50% of cases, uterine sarcoma has been detected in stage I. In our patient, it was a question of invasive sarcoma of the uterine corpus with right ovarian metastases, i.e., Stage III of the disease, thus indicating late establishment of the disease diagnosis. Since uterine leiomyoma had been discovered three years previously in our case, it was probably a question of sarcomatous alterations in the uterine leiomyoma. The incidence of sarcomatous alterations in benign uterine leiomyoma is 0.13-0.81% [11, 12]. In our patient, there were right ovarian metastases, while there were no metastatic changes in the pelvic and paraaortal lymph nodes. The incidence of ovarian metastases and lymph node metastases in leiomyosarcoma is very low. In patients with Stages I and II of the disease, ovarian metastases were found in 2.8% of cases, while there were no metastases in the lymph nodes. In advanced stages of the disease with extragenital disease, the percentage of ovarian metastases was about 5.4%, and in the lymph nodes about 8.1% [13]. A multidisciplinary approach to treatment of patients with uterine sarcoma is crucial for optimal treatment [14].

Treatment is surgical and includes total abdominal hysterectomy with bilateral salpingo-oophorectomy, as well as pelvic and paraaortal lymphadenectomy and peritoneal lavage [5]. The risk of recurrence is high so upon surgical therapy adjuvant chemotherapy is frequently applied as well as radiation therapy [6,9]. Pelvic radiation therapy has not significantly improved patient survival [15].

Disease prognosis is poor [7]. It primarily depends on disease extent at time of diagnosis and the degree of mitotic tumor activity [8]. High mitotic indices and cellular atypia are significant indicators of tumor malignancy. A histological indicator of poor tumor prognosis includes the presence of anaplasia and tumor necrosis [15]. Some authors think that for leiomyosarcoma the tumor size is the most important prognostic factor and that tumors with a maximal diameter of over 5 cm have poor prognoses [16].

Survival of patients with uterine leiomyosarcoma is 20-63%. Five-year survival for patients with Stage I disease is approximatively 50% and for other stages 0-20% [17]. For leiomyosarcomas, overall survival has been 67% at one year and 33% at five years, but relapse-free survival has been 33% at one and five years [18].

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