Pol. Ann. Med., 2011; 18 (1): 139–145.

CASE STUDY

LIPOLEIOMYOMA OF THE UTERUS – A CASE REPORT

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ABSTRACT

Introduction. Lipoleiomyoma (LL) is a rare, benign neoplasm, which most frequently occurs in postmenopausal women and is predominantly located in the uterus. However, extrauterine locations have been reported as well, e.g., in the broad ligament of the uterus, ovary, and peritoneum. Usually, LL is found in association with ordinary uterine leiomyomas.

The incidence of this neoplasm is estimated at 0.03–0.2%. Clinical manifestations of LL are identical to those of uterine myomas. Most frequently, symptoms include: palpable mass in the pelvis minor, pelvic pain, and abnormal uterine bleedings. The majority of patients do not report any symptoms. LL is an extremely rare, benign tumor of the uterus. When asymptomatic, it does not require treatment.

Aim. This paper aimed at presenting a very rare case of LL in a postmenopausal patient.

Materials and methods. This case has been described on the basis of the medical documentation concerning the patient (case record No 24285/2010), hospitalized in the Department of Oncology and Gynecologic Oncology, Health Care Institution of the Ministry of Internal Affairs and Administration (ZOZ MSWiA) with the Warmia and Mazury Oncology Center in Olsztyn.

Case study. The patient, 56-years old, multipara, was admitted to the Department with a preliminary diagnosis of uterine myomas, causing pain and discomfort within the region of pelvis minor. Ultrasonography (USG) showed a hyperechoic lesion, about 35 mm in diameter, well-circumscribed by a hypoechoic rim, located in an enlarged uterus. The remaining part of the uterus showed a heterogeneous echo-

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Received 28.12.2010, accepted 3.02.2011

genic pattern. During hospitalization at the Department, the patient was operated on. The amputation of the uterine corpus was performed, without uterine adnexa. Histopathological test involving the postoperative uterus specimen detected LL.
Results and discussion. LL cases are reported as examples of neoplasms diagnosed accidentally in the postoperative specimens. Cases of complex diagnostics, with the use of USG, as well as computed tomography (CT) and magnetic resonance imaging (MRI), when LL is suspected, are extremely rare.
In postmenopausal women, suffering from hypothyroidism, diabetes or hyperlipidemia, lipomyomas in the uterus are more frequently found. It is suggested that metabolic changes occurring in postmenopausal women are a likely cause for the development of adipose tissue metamorphosis in LL.
Detection of adipose tissue in the tumor mass confirms the diagnosis of LL. Usually, LL is initially recognized as uterine myoma, and depending on the coexisting symptoms, may be treated surgically.
Diagnostic difficulties and the importance of differential diagnosis towards other tumors located in the pelvis minor are highlighted. Asymptomatic course and lack of characteristic clinical manifestations of the tumor, with a simultaneous characteristic image in USG, CT and MRI are emphasized.
Conclusions. When palpable mass is detected during a manual pelvic examination in postmenopausal patients, a gynecologist should consider the possibility of LL. A characteristic USG image, i.e., a hyperechoic lesion with a hypoechoic rim, detected in the uterus should be regarded as an indication for considering such diagnosis.
The final diagnosis is established on the basis of a histopathological test involving the tissue specimen.

Key words: lipoleiomyoma (LL), myomata uteri

INTRODUCTION

Lipoleiomyoma (LL) is a rare, benign neoplasm, which is most frequently located in the uterus [1, 2, 5, 6]. It can be located both within the uterine corpus and in the uterine cervix. There are reports of LL extrauterine locations in the broad ligament of the uterus, ovary, and peritoneum [3, 12, 13, 19].

The incidence of this neoplasm is estimated at 0.03–0.2% [15]. It is generally found in postmenopausal women, usually as a neoplasm coexisting with uterine leiomyomas. Clinical manifestations of LL are identical to those of uterine myomas. Most frequently, symptoms include: palpable mass in the pelvis minor, pelvic pain, and abnormal uterine bleedings. The majority of patients do not report any symptoms.

Intramural locations of LL in the uterine fundus are most common, but subserosal locations have been also reported [20].

Contrary to uterine myomas, which are usually found in women at the reproductive age and regress after menopause, LL is more frequently observed in older patients. It is an extremely rare, benign tumor of the uterus. When asymptomatic, it does not require treatment [7, 8].

Imaging examinations: ultrasonography (USG), computed tomography (CT), magnetic resonance imaging (MRI) help to differentiate LL and uterine myomas as well as dermoid cysts – teratoma and other malignant tumors in the ovaries [4, 11, 16, 18].

Detection of an admixture of mature adipocytes and smooth muscle cells in the microscopic image is required for determining the tumor to be LL. In the subject literature there are no reports as to the amount of the adipose tissue component required for classifying the tumor as LL [9].

AIM

A case report concerning a 56-year old woman treated surgically for diagnosed uterine myomas has been presented. In the histopathological specimen obtained from the removed uterine corpus, LL has been recognized.

MATERIALS AND METHODS

This case has been described on the basis of the medical documentation concerning the patient (case record No 24285/2010), hospitalized in the Department of Oncology and Gynecologic Oncology, Health Care Institution of the Ministry of Internal Affairs and Administration (ZOZ MSWiA) with the Warmia and Mazury Oncology Center in Olsztyn.

CASE STUDY

The patient, 56-years old, multipara, was admitted as scheduled to the Department of Oncology and Gynecologic Oncology, ZOZ MSWiA, with the Warmia and Mazury Oncology Center in Olsztyn with a preliminary diagnosis of uterine myomas, causing pain and discomfort within the region of pelvis minor. The interview provided the following information: first menstruation at the age of 11. She gave birth 3 times, including twins. She experienced the last menstruation at the age of 50. The patient came to a gynecologist because of discomfort and pain in the hypogastrium. She had not been operated on. Family history was irrelevant. Results of additional examinations were within the norm. Metabolic disorders, hyperlipidemia, diabetes, and hypothyroidism were not diagnosed. The patient reported allergy to penicillin and aspirin. On admission, she was in a good general condition. A physical examination did not detect any abnormalities. During gynecological examination, a bimanual examination detected a palpably enlarged uterus the size of a fist, of limited mobility, adnexal mass unchanged palpably. Uterine cervix presented no visible changes and no erosion. Cervical cytology was normal. USG showed a hyperechoic lesion, about

35 mm in diameter, well-circumscribed by a hypoechoic rim, located in an enlarged uterus. The remaining part of the uterus showed a heterogeneous echogenic pattern (Fig. 1). The patient presented the results of the biopsy of the uterine cervix, canal and cavity, performed a month earlier at this Department. In the uterine cavity scrapings, fragments of leiomyoma were detected, in the cervix canal scrapings – fragments of cervix epithelium, and no pathological changes in the specimen of the cervical disc of the vaginal portion of the cervix.

After additional preoperative examinations, the patient was qualified for the amputation of the uterine corpus, with a preliminary diagnosis of uterine myomas, as well as pain and discomfort within the region of the pelvis minor. Informed consent was obtained for performing the surgery. A typical amputation of the uterine corpus was performed, leaving the uterine cervix and adnexa intact, since the patient had not consented to their removal. The patient received prophylactic preoperative antibiotic therapy and antithrombotic therapy, as well as analgesics. In the postoperative period, on the 3rd day, a papular rash developed – macular, located at the back, with associated pruritus. Following dermatological consultation, it was diagnosed as an allergic drug-induced eruption (Poltram). The patient was treated with 100 mg of hydrocortisone IV and Clemastin 2 × 1 tablet. The changes regressed after 2 days. The patient was discharged on the 5th day following the surgery, advised to take Clemastin 2 × daily. On the basis of the histopathological test performed in the Provincial Hospital LL of the uterine corpus was diagnosed. Desmin (+/–), MIB-1 = 0% of cells; leiomyomas of the uterine corpus; atrophic endometrium; parametrium free of changes.

During a follow-up gynecological examination, 4 weeks following the operation, the patient did not report previously present pelvic pain, and felt good. The wound healed by first intention.

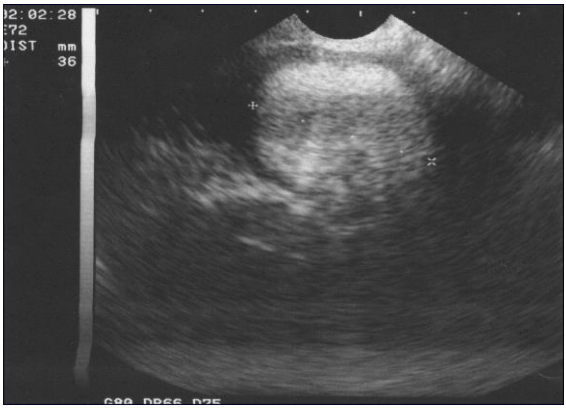

Fig. 1. Sonogram of the uterus showing LL – hyperechoic mass circumscribed by a hypoechoic rim

DISCUSSION

LL cases are extremely rare in gynecological practices. They should be considered, however, in differentiating palpable lesions in the uterus, especially in postmenopausal women [9, 17, 20]. LLs are frequently reported as examples of neoplasms diagnosed accidentally in postoperative specimens [1, 2, 5, 6]. Cases of complex diagnostics, with the use of USG, as well as CT and MRI, when LL is suspected, are extremely rare [10, 16]. Detecting adipose tissue in the tumor mass confirms the diagnosis of LL. Usually, LL is initially recognized as uterine myoma, and depending on the co-occurring symptoms, may be treated surgically. USG displays features suggesting LL [14]. An image showing a hyperechoic mass circumscribed by a hypoechoic rim is characteristic for LL. Uterine myomas are the most frequent benign neoplasms found in female reproductive organs. They are associated with a hormonal activity of estrogen, and they most often occur during the reproductive period. They regress in the postmenopausal period, which is the result of a lack of hormonal activity in the ovaries. They are manifested clinically in a variety of ways: palpable mass in the pelvis minor, pain and discomfort in the hypogastrium, menstrual disorders, severe uterine bleedings leading to anemia. USG shows various images of uterine myomas. Typical uterine myomas are presented as well-demarcated hypoechoic masses, poorly suppressing and permeable for ultrasound. Myomatic uterus shows as a large, heterogeneous, circular mass, often with uneven external borders. Occasionally myomas degenerate and may show calcifications which sometimes become cystoid and undergo fatty degeneration. Differential diagnosis should also consider leiomyosarcomas, i.e., fast growing, malignant tumors formed on the basis of myomas, as well as changes involving the ovaries typical of dermatoid cysts – teratomas, whose USG image depends on the content of the cyst.

In postmenopausal women, suffering from hypothyroidism, diabetes or hyperlipidemia, more frequently LL-like changes in the uterus are found [9]. It is suggested that metabolic changes occurring in postmenopausal women are a likely cause for the development of adipose tissue metamorphosis in LL [9]. This is, however, not observed in all cases. In this described case, the patient did not exhibit any metabolic disorders.

Histogenesis of LL has not yet been precisely explained. Nevertheless, immunohistochemical studies indicate a complex histogenesis and a likelihood of LL being formed from immature mesenchymal cells, or as a result of the metamorphosis of smooth muscle cells into adipocytes [4, 5].

Detection of an admixture of mature adipocytes and smooth muscle cells in the microscopic image is required for determining the tumor to be LL (Fig. 2, 3). Adipocytes may be regularly positioned within the tumor or may exhibit a focal location [4, 5].

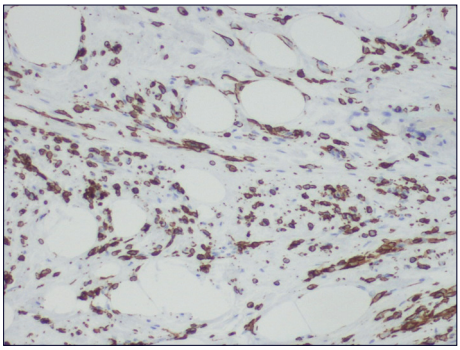

Fig. 2. Lipoleiomyoma [Desmina, magn. 200×]

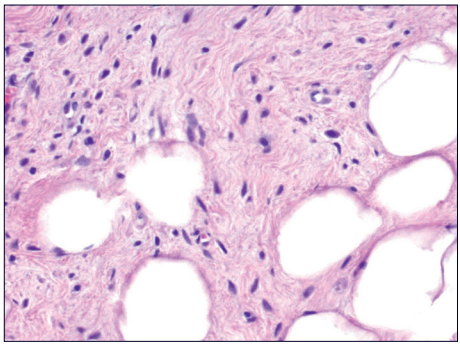

Fig. 3. Lipoleiomyoma [HE, magn. 400×]

In differential diagnosis of LL, imaging examinations are helpful: USG of the pelvis minor, CT and MRI [20].

In USG, LL is presented as a hyperechoic lesion circumscribed by a hypoechoic rim. The image shows a layer of myometrium surrounding the fatty central component [15]. A USG image is often interpreted by a sonography specialist as uterine myoma. In CT, the fatty component is a demarcated hypodense mass, with negative values of attenuation expressed in Hounsfield Units.

In MRI, the fatty nature of the lesion is suggested by hyperintensity on T1-weighted images. Fatty components can be also confirmed by fat suppression techniques [4, 9, 16, 18].

Imaging diagnostics play a significant role in determining the location of the intrauterous fatty nature of LL. MRI is used in differential diagnosis of LL and ovarian dermoid cysts – teratomas. Unlike LL, teratomas definitely require a surgical intervention [4].

CONCLUSIONS

When palpable mass is detected during a manual pelvic examination in postmenopausal patients, a gynecologist should consider the possibility of LL. A characteristic USG image, i.e., a hyperechoic lesion with a hypoechoic rim, detected in the uterus should be regarded as an indication for considering such a diagnosis. CT and MRI may be helpful in preoperative diagnostics of these lesions. Such information is important for a gynecologist when qualifying a patient for a surgical procedure. The final diagnosis is established on the basis of a histopathological test involving the tissue specimen.

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