Uterine Lipoleiomyoma
(A Case Report)

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Abstract

Uterine lipleiomyoma is a rare variant of leiomyoma with reported prevalence of 0.03% to 0.2%. Lipoleiomyomas of the uterus are typically found in postmenpausal women and in most cases are asymptomatic and are associated with ordinary leiomyomas. This rare tumor is composed of an admixture of mature adipocytes and benign smooth muscle cells. The histogenesis for this tumor is still controversial. We report a case for a fifty- seven year old postmenopausal female presented to the gynecological department with pelvic pain and heaviness. Abdominopelvic ultrasound and MRI showed a pelvic mass. The patient underwent total abdominal hysterectomy and found to have myometrial mass measured 11x11x6.5 cm which was obliterating the endometrial canal. The histopathological diagnosis was consistent with lipoleiomyoma. The uterus showed multiple small leiomyomas. We report this case because of its rarity.

Keywords: Leiomyoma, Lipoleiomyoma, Benign tumor, Uterus, Postmenopause.

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Materials and Methods

A fifty seven year-old, Para 6, postmenopausal woman presented to the gynecological clinic complaining of pelvic pain and heaviness with abdominal distention and postmenopausal bleeding. The gynecological exam revealed a huge pelvic mass, and the remainder of the physical exam was unremarkable. Radiological examination showed an intrauterine mass filling the endometrial cavity along with two small leiomyomas. Laboratory tests were significant for increased HbA1c (level of 8.9), and random blood sugar level of 118 mg/dL. The lipid profile was within normal levels. The serum tumor markers were within normal limits. The patient underwent total abdominal hysterectomy. The specimen was sent for the Histopathology lab where the uterine mass was examined and diagnosed as lipoleiomyoma. The patient is healthy and asymptomatic after one year follow up.

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Pathological Findings

Grossly, the uterus was reported to have two small subserosal leiomyomas and a large well circumscribed mass with pushing margins attached to the myometrium, obliterated the endometrial canal and measured 11x11x6.5 cm. Cut sections of the mass showed a firm tumor composed of yellowish foci admixed with grayish tissue. No hemorrhage or degeneration was identified. Several formalin-fixed paraffin- embedded sections were submitted, processed and stained with hematoxylin and eosin stain.

Microscopic examination revealed a tumor composed of two admixed components. The predominant one which comprised 60% of the tumor showed proliferation of bland spindle cells with oval nuclei and cytoplasmic clearing lacking significant mitotic activity and were arranged in fascicles [figure 1A]. The other component which made up 40% of the tumor was composed of mature adipocytes without lipoblasts [Figure 1B]. No tumor coagulative necrosis was noticed throughout the mass.

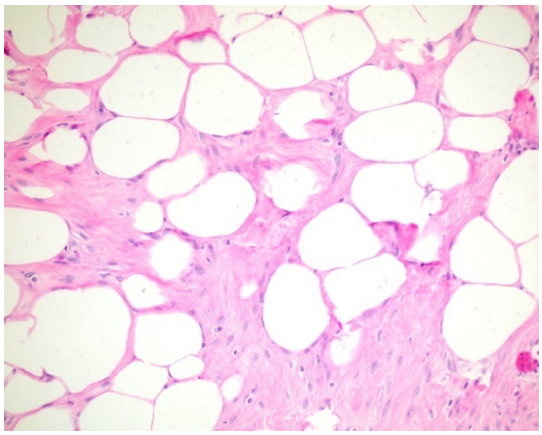

Figure 1-A: Proliferation of bland spindle cells arranged in fascicles admixed with mature adipocytes (H&E X10)

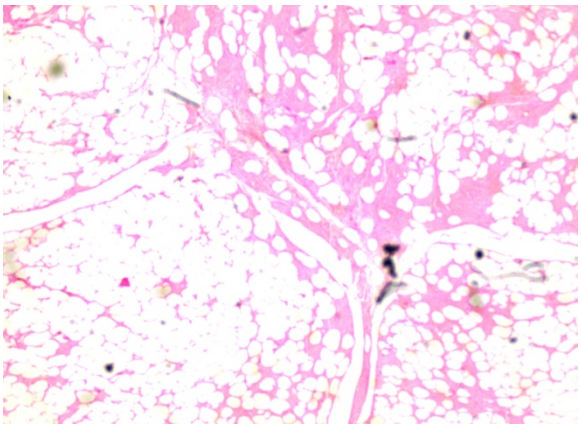

Figure 1-B: This focus shows a large percentage of adipocytes establishing the diagnosis of a lipoleiomyoma (H&E X10)

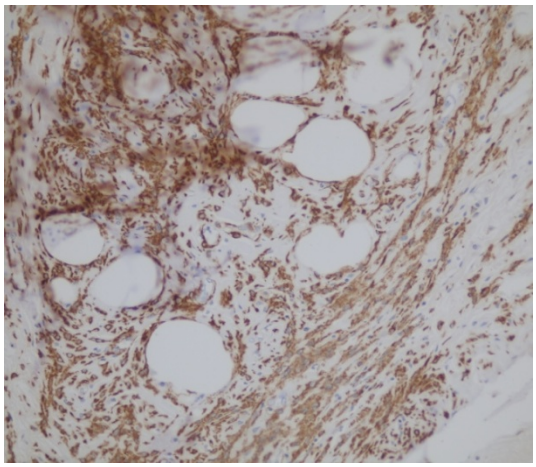

Figure 1-C: Immunohistochemical stain for smooth muscle actin shows positivity in the spindle cell component (Actin immunostain X10)

Imunohistochemical stains were performed to confirm the diagnosis and rule out the possibility of other diagnoses. The spindle cells were positive for smooth muscle actin [figure 1C], desmin, caldesmin and vimentin, but negative for pancytokeratin, CD34, HMB45, and P53. The adipose tissue component was positive for vimentin and S100, but negative for pancytokeratin, smooth muscle actin, desmin, CD34, HMB45, and P53. The negative staining for HMB-45 excluded the remote possibility of angiomyolipma.MIB1 immunostain showed an average proliferative index of 1% in the spindle cells and 0.5% in the adipocytes, a finding which was compatible with a benign tumor. The diagnosis was a uterine lipoleiomyoma. Sections from the subserosal fibroids showed features of typical leiomyoma. Sections from the endometrium showed atrophy, and the cervix was unremarkable.

Discussion

Smooth muscle tumors are the most frequent mesenchymal tumors of the uterus. One variant is lipoleiomyoma. Myolipoma of soft tissue was firstly described 1991 by Meis and Enzinger. Similar tumors in the uterus are known as lipoleiomyomas[1] which are composed of mature adipocytes and smooth muscle cells. The adipocytes may be evenly distributed throughout the tumor or they may be concentrated in only focal areas. Also, adipocyte component in lipoleiomyoma may differ widely and a certain level of adipocytes was not defined to achieve the diagnosis of lipoleiomyoma[2]. Lipoleiomyoma is rare type of leiomyoma with reported incidence varies from 0.03 to 0.2%[3]. It shows a benign behavior like the classical leiomyoma and it is prevalent in menopause,in an association with multiple leiomyomas and a preferential onset in the subserosa[4]. Lipoleiomyoma of the uterus seems to have an uneventful clinical course. There were no recurrences or fatalities related to tumor[5]. These tumors generally occur in obese perimenopausal or menopausal women. The signs and symptoms are similar to those caused by leiomyomas of the same size, such as a palpable mass, hypermenorrhea, and pelvic pain but most patients are asymptomatic[6]. The majority of cases are located in the uterine corpus[6] but it was reported to occur in the cervix[6,7&8], peritoneum[9] and broad ligament[2,6, 10 &11]. One case of benign metastasizing lipoleiomyoma to the lung was reported[12] and another case of intravenous leiomyomatosis with histological features of a lipoleiomyoma was also reported[13]. Imaging studies showed that the data yielded by CT and MRI on the fatty nature of the lesion are valuable in diagnosing this entity but the final pathological examination results confirmed the diagnosis of lipoleiomyoma[14]. The challenge of these tumors lies in their unresolved histogenesis and occasional diagnostic confusion with sarcomas. Histogenesis remains controversial. It was previously called as fatty metamorphosis, lipomatous degeneration, and adipose metaplasia, but it is now regarded as a distinct true neoplasm[15]. In one study immunohistochemical studies showed that HMGI-C was aberrantly expressed in this tumor. These observations suggest that uterine lipoleiomyomas have a pathogenetic origin similar to that of typical leiomyomas[16]. Lin et al. demonstrated that lipoleiomyoma may associate with concomitant metabolic disorders including hyperlipidemia, hypothyroidism, and diabetes mellitus[17]. Confirming the benign nature of this tumor is important because it can closely resemble well-differentiated liposarcoma and few cases of uterine primary liposarcoma were reported to arise from malignant transformation of a lipoleiomyoma[18].

Lipoleiomyoma must be thought of in the differential diagnosis of giant uterine tumors and should be removed when diagnosed, because malignancy cannot otherwise be excluded[19].

Conclusion

we reported a case of lipoleiomyoma in a postmenopausal woman which is a rare variant of leiomyoma. We described the clinicopathologic and immunohistochemical features of a lipoleiomyoma, This tumor is rare and should be considered in the differential diagnosis of tumors of the uterus. If the tumor is large and symptomatic, it should be excised to relieve the symptoms and more importantly to exclude malignant tumors such as leiomyosarcoma and liopsarcoma. In the literature three cases of liposarcoma were reported to arise from lipoleiomyoma.

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ورم الرحم المكون من خلايا عضلية ملساء وخلايا دهنية

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الملخص

ورم الرحم المكون من الخلايا العضلية الملساء مع الخلايا الدهنية يعدُّ من الأورام النادرة بحيث تتراوح نسبة شيوعه بين 0.03-0.2%. هذا النوع من الأورام يصيب النساء في سن اليأس. في معظم الحالات لا تشكي المرأة المصابة من أي أعراض. وعادة ما يصاحب الورم الحميد الأكثر شيوعا عند النساء، والمكون من خلايا العضلات الملساء فقط. تحت الفحص المجهري يتكون هذا الورم من خلايا عضلية ملساء بالإضافة لخلايا دهنية حميدة. في هذه المقالة ننشر حالة لمريضة تبلغ من العمر سبعة وخمسون عاما في سن اليأس قامت بمراجعة عيادة النسائية تعاني من ألم في أسفل البطن . فحوصات الأشعة أظهرت وجود ورم في الرحم. بعد ذلك خضعت المريضة لعملية استئصال الرحم حيث وجد أنه يحتوي على ورمين حميدين في جدار الرحم بالإضافة لكتلة كبيرة في القناة الرحمية يبلغ حجمها 11×11×6.5 سم، حيث تم فحصها مجهريا وأظهرت النتيجة ورماً حميداً مكون من الخلايا العضلية الملساء مع الخلايا الدهنية. هذا الورم يعدُّ نادر جداً.

الكلمات الدالة: ورم الخلايا العضلية الملساء الحميد، ورم الخلايا العضلية الملساء مع الخلايا الدهنية الحميد، ورم حميد، الرحم، سن اليأس.