Case Report:

Submucosal lipoleiomyoma in a 50 year old: a rare entity

Rajeev Sen, Sumiti Gupta, Shruti Semwal, Ashima Batra, Manish Chaudhary

1Senior Professor & Head, Department of Pathology, Pt B.D. Sharma PGIMS, Rohtak, Haryana
2Professor, Department of Pathology, Pt B.D. Sharma PGIMS, Rohtak, Haryana
3Junior Resident, Department of Pathology, Pt B.D. Sharma PGIMS, Rohtak, Haryana
4Senior Resident, Department of Pathology, Pt B.D. Sharma PGIMS, Rohtak, Haryana
5Senior Resident, Department of Pathology, Maharishi Markandeshwar University, Mullana, Haryana

Corresponding author: Dr Ashima Batra

Abstract:
Uterine lipoleiomyomas are rare, fat containing benign tumors. Their reported incidence varies from 0.03 to 0.2%. They consist of variable proportion of mature lipocytes and smooth muscle cells. They occur in different locations including uterine corpus, cervix and ovaries. These tumors generally occur in asymptomatic obese perimenopausal or menopausal women. We reported a case of 50 years old multiparous postmenopausal woman presenting with complaints of bleeding per vagina and clinically diagnosed as leiomyoma. But histopathological examination of submucosal growth revealed lipoleiomyoma. It is a rare tumor and should be considered in the differential diagnosis of pelvic lipomatous mass.

Keywords: Lipoleiomyoma, uterus, menopause

Introduction
Lipomatous uterine tumors of uterus are unusual benign neoplasms occurring primarily in obese perimenopausal and post menopausal women. Histologically, these tumors comprise a spectrum including pure lipomas, lipoleiomyomas and fibrolipomyomas. The reported incidence varies from 0.03% to 0.2% of leiomyomas.1 They are composed of an admixture of smooth muscle and mature adipose tissue. The clinical features and optimal treatment of this neoplasm remain unclear because of its rarity.2

Case Report
A 50 years old multiparous (P4) woman presented with complaints of bleeding per vagina since four months. On examination uterus was irregularly enlarged to 14 weeks. Abdominal hysterectomy was done and specimen was subjected to histopathological examination.

On gross examination, uterus and cervix along with tumor measured 11.5x10.0x9.0 cm. On cut section, a submucosal growth measuring 9.0x7.5x5.0 cm was identified towards the luminal surface. External and cut surface of the tumor was grey yellow (Fig 1).

On histopathological examination, the tumor comprised of mixture of spindle-shaped smooth muscle cells without atypical nuclei in a whorled pattern and mature fat cells. Nuclei of the smooth muscle cells were elongated and had finely dispersed chromatin and inconspicuous to small nucleoli. Bizarre pleomorphic cells, mitotic figures or necrosis were not present. Between the muscle cells, a significant amount of fat cells was visible. The adipose component was entirely mature without any lipoblasts (Fig 2 & 3). Based on these findings, the tumour was diagnosed as lipoleiomyoma.
Discussion

Lipomatous uterine tumors are uncommon benign neoplasms, with incidence ranging from 0.03% to 0.2%. They can generally be subdivided into two types: pure or mixed lipomas. The latter consist of lipoleiomyoma, angiomyolipoma and fibrolipoma. Lipoleiomyoma is an unusual uterine fatty tumor. Myolipoma of soft tissue was firstly described in 1991 by Meis and Enzinger. These tumors show characteristic histological findings, being composed of benign smooth muscle and mature adipose tissue. Similar tumors in the uterus are known as lipoleiomyomas. The most common location is in the uterine corpus. The tumors are usually intramural however, they can be found anywhere in the uterus or cervix and can be subserosal or submucosal. The origin of the lipomatous lesions of the uterus has been the subject of much speculation, including misplaced embryonic fat cells, metaplasia of muscle or connective tissue cells into fat cells, lipocytic differentiation of a specific primitive connective tissue cell, perivascular fat cells accompanying the blood vessels into the uterine wall during surgery, or fatty infiltration or degeneration of connective tissue. It is suggested that lipoleiomyomas result from fatty metamorphosis of uterine smooth muscle cells which can proceed to form localized or diffuse mature adipocyte tissue in leiomyoma or in the myometrium rather than fatty degeneration. They were previously called as fatty metamorphosis, lipomatous degeneration and adipose metaplasia. It is now regarded as distinct neoplasm.

These tumors usually occur in postmenopausal women between 50 and 75 years of age. Many of these patients are asymptomatic, but in some patients symptoms are similar to those of uterine leiomyomas, such as pelvic discomfort, heaviness, and pressure, or vaginal bleeding. A number of various lipid metabolic disorders or other associated conditions, which are associated with estrogen deficiency as occurs in peri- or postmenopausal period, possibly promote abnormal intracellular storage of lipids. The fatty tissue is not degenerative but is the active proliferative tissue and the presence of estrogen and progesterone receptor status points towards the fact that the fat is specific female genital tract fat.

During imaging, the presence of fat with in a uterine mass is diagnostic of lipoleiomyoma as well as pure lipoma. The diagnosis can be made by MRI or CT which can specifically depict fat content within the tumor.

The differential diagnosis of the lipomatous mass in the pelvis include benign cystic teratoma, malignant degeneration of cystic teratoma, non-teratomatous lipomatous ovarian tumour, benign pelvic lipoma, liposarcoma and lipoblastic lymphadenopathy. Association of lipomatous uterine tumors and endometrial carcinomas with lipoleiomyosarcoma arising in uterine lipoleiomyomas has been reported. Lipoleiomyomas, when asymptomatic require no treatment and are clinically similar to leiomyoma. So it is important to differentiate these from ovarian teratoma, which requires surgical excision.

Conclusion

Though imaging can assist in the preoperative diagnosis and localization of the lipoleiomyoma, it is the histopathological examination that confirms the diagnosis. The rarity of this case prompted us to bring it to the notice.
Fig 1. Cut section of hysterectomy specimen showing a glistening yellow submucosal growth.

Fig 2. Microphotograph revealing mixture of spindle-shaped smooth muscle cells in a whorled pattern and mature fat cells. (H & E, 40X)

Fig 3. Microphotograph revealing benign appearing nuclei of spindle-shaped smooth muscle cells at higher magnification. (H & E, 200X)

References


Date of submission: 23 May 2014 Date of Publication: 20 July 2014