

Lipoleiomyoma of the Uterus

Murat Alper, Kamuran Aylin Aksoy, Mazlume Suna,
Selma Çukur, Olcay Kandemir Belenli

Summary

Lipoleiomyomas are uncommon benign neoplasms of uterus consisting of variable portions of mature lipocytes and smooth muscle cells. These tumours generally occur in asymptomatic obese perimenopausal or menopausal women. In this paper, a case of lipoleiomyoma uteri in a 53-year old menopausal woman is presented.

Introduction

Lipomatous uterine tumours are unusual benign neoplasms.^{1,2} Histologically, these tumours comprise a spectrum including pure lipomas, lipoleiomyomas and fibrolipomyomas. Lipoleiomyoma is a very rare lesion of the uterus occurring primarily in obese perimenopausal and postmenopausal patients. The tumour contains long intersecting bundles of bland smooth muscle cells mixed with nests of mature fat cells.^{2,3,4} We report a case of lipoleiomyoma that arose in the uterus.

Case Report

A 53-year woman (gravida 3, parity 2) presented with right inguinal region pain and intermittent vaginal bleeding for twenty days. The patient's history revealed menarche at the age of thirteen, regular menstruations of four-five days duration and moderate intensity at twenty-eight day intervals. She had undergone menopause two years ago.

Gynaecological examination revealed no abnormalities of the vulva, cylindrical vaginal portion of the cervix. The uterine cavity is a little big size. The left and the right adnexae were non-palpable, and there was marked tenderness to palpation on the right, and no evident pathologic change was detectable with clinical examinations. Findings of the vaginal ultrasound examination suggested a well-circumscribed 5 cm diameter mass having semisolid character and located as intramural in the posterior wall of the uterus. In addition, there were two small intramural leiomyomas of 1 and 0.5 cm diameter and the endometrial

thickness was 6 mm. Both ovaries and tubes were normal in appearance. No ascites was seen in the abdomen. All the standard serological parameters were within normal range. The patient underwent total abdominal hysterectomy and bilateral salpingo-oophorectomy because of multiple leiomyomas.

On gross appearance of the specimen, the uterus measured 7x6.5x6 cm and had three intramural, bulging, well-circumscribed round masses. The biggest nodule, which was measured 5 cm in diameter, differed from the typical appearance of uterine leiomyomas by being pale-yellow and having a somewhat softer consistency on its cut surface. The other two intramural lesions, each 2 cm in diameter, showed a coarsely whorled pattern with white-greyish on its cut surface. No areas of necrosis or hemorrhages were seen. The serosal surfaces of the uterus and both the ovaries and fallopian tubes were macroscopically normal.

Histological examination, mixture of spindle-shaped smooth muscle cells without atypical nuclei in a whorled pattern and mature fat cells (25% of tumor volume) was demonstrated in the large intramural lesion, which was determined to be a lipoleiomyoma (Figure 1). Nuclei of the smooth muscle cells were elongated and had finely dispersed chromatin and small nucleoli. Bizarre pleomorphic cells, mitotic figures or necrosis were not present. Between muscle cells, a significant amount of fat cells were visible. The adipose component was entirely mature without any lipoblasts. Based on these findings, the tumour was diagnosed as a benign lipoleiomyoma. Sections of the two small intramural lesions showed the classical appearance of uterine leiomyomata.

Discussion

Lipoleiomyoma is an unusual uterine fatty tumour. Myolipoma of soft tissue was firstly described 1991 by Meis and

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Murat Alper*

Abant Izzet Baysal University,
Medical School of Düzce, Departments of Pathology, Düzce, Turkey
Email: muratalper@tusdata.com

Kamuran Aylin Aksoy

Abant Izzet Baysal University
Medical School of Düzce, Departments of Pathology, Düzce, Turkey

Mazlume Suna

Abant Izzet Baysal University
Medical School of Düzce, Departments of Pathology, Düzce, Turkey

Selma Çukur

Abant Izzet Baysal University
Medical School of Düzce, Departments of Pathology, Düzce, Turkey

Olcay Kandemir Belenli

Abant Izzet Baysal University
Medical School of Düzce, Departments of Pathology, Düzce, Turkey

*Corresponding Author

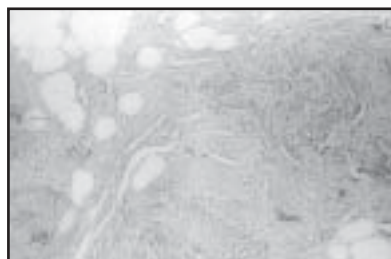


Figure 1:
Lipoleiomyoma characterized by bundles of fusiform smooth muscle cells and mature fat cells (H&E 100x)

Enzinger.⁵ These tumours show characteristic histological findings, composed of benign smooth muscle and mature adipose tissue. In the uterus, similar tumours are known as lipoleiomyomas.⁵ Lipoleiomyomas occur in different locations including cervix.² It is suggested that lipoleiomyomas result from metamorphosis of uterine smooth muscle which can proceed to form localized or diffuse mature adipose tissue in a leiomyoma or in the myometrium.⁶ Three terms have been adopted for the nomenclature of the various morphological types of lipomatous lesions of the uterus; diffuse lipomatosis in a leiomyoma, circumscribed lipomatosis in a leiomyoma, and uterine lipoma.⁶

In the literature these tumours generally occur in asymptomatic, obese perimenopausal or menopausal women.^{1,6-8} An incidence of approximately 0.28% of all leiomyomas' and 0.39 % of all hysterectomies' specimens was reported from National Taiwan University Hospital between January 1994 and December 1998 by K.C.Lin et al who analyzed 2878 leiomyomas cases and 2071 hysterectomies specimens.¹

The pathogenesis remains obscure. Immunocytochemical studies confirm the complex histogenesis of these tumours, which may arise from mesenchymal immature cells or from direct transformation of smooth muscle cells into adipocytes.^{1,4,8} A number of various lipid metabolism 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.¹

In conclusion, review of previous case reports together with the condition of our patient reveals that patients with lipoleiomyoma are often overweight and menopausal. Lipoleiomyomas are benign tumors of the uterus that do not directly affect mortality.

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