

LIPOLEIOMYOMA OF UTERUS A RARE BENIGN TUMOR

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ABSTRACT

Lipoleiomyoma is a rare benign fatty tumor of uterus as a distinct variety of leiomyoma (Fibroid). Histologically, it is composed of variable amounts of adipocytes and smooth muscle cells, separated by thin fibrous tissues. The exact aetiology is unknown, but it is thought to represent fatty metamorphosis of smooth muscle cells of leiomyoma. The overall incidence reported as 0.03 to 0.2 % and comprising of 0.35% of uterine myomatous tumors. Here we present a case of 50 years old post menopausal woman with uterine fibroid. We confirmed our diagnosis on characteristics radiological findings of lipoleiomyoma on ultra sound and CT scan.

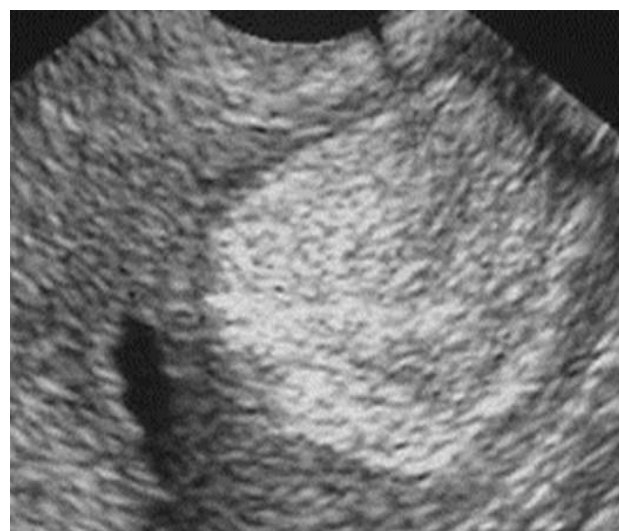
Keywords: Lipoleiomyoma, uterus, postmenopausal.

Case Report

A 50 years old postmenopausal woman presented with history of long standing lower abdominal pain and discomfort. No history of vaginal discharge or post menopausal bleed. She attained the menopause 4 years back. No history of menstrual irregularity. No significant past medical and surgical history could be elicited. Clinically the patient was obese but otherwise healthy. Her systemic examination and routine blood investigations were normal. Gynecological examination revealed palpable bulky uterus.

Ultrasound showed large solitary hyper echoic mass lesion encased by hypo echoic rim with posterior acoustic attenuation noted in the anterior wall of uterus. No significant vascularity noted on color Doppler. Both adnexa appear unremarkable (Fig. 1). The contrasted CT scan of abdomen confirmed the presence of large well defined mixed density, predominantly fat attenuating mass lesion arising from the anterior wall of uterus. The size of lesion measures 9.7 x 12.7 x 9.5 cm. Endometrium and both ovaries were normal. No pelvic lymphadenopathy or ascites noted (Fig. 2). Ultrasound and CT scan confirmed uterine origin of mass lesion. Based on

characteristic radiological features such as appearance, density in Hounsfield units, it was composed of predominantly fatty component. The patient was diagnosed with benign uterine lipoleiomyoma. The patient opted for surgery due to pain and discomfort. The histopathology confirmed the above mentioned diagnosis.



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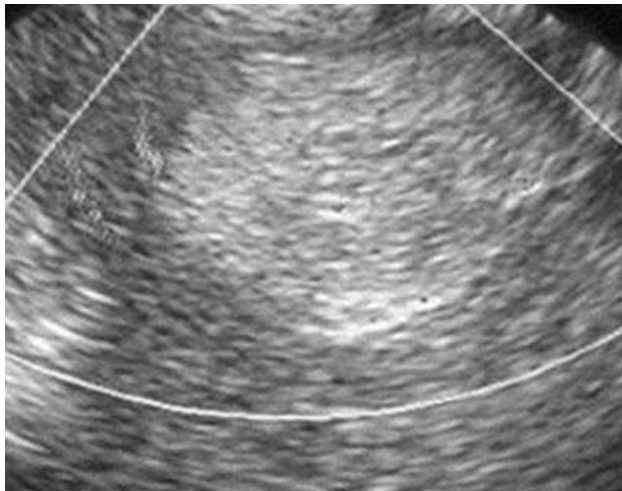


Figure 1: Ultra sound images axial and sagittal views showing large solitary hyper echoic mass lesion encased by hypo echoic rim noted in the anterior wall of uterus. No significant vascularity noted on color Doppler.

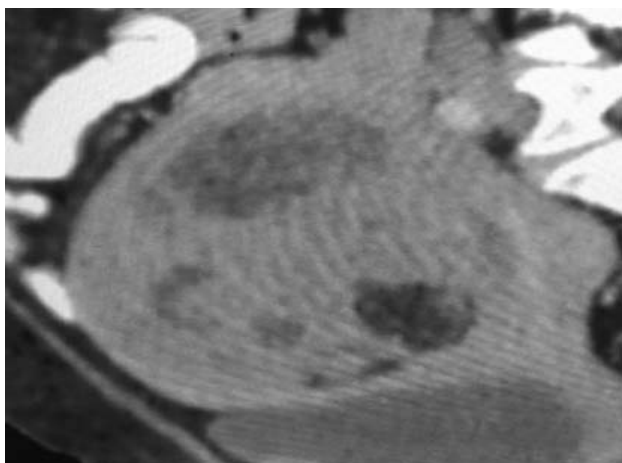
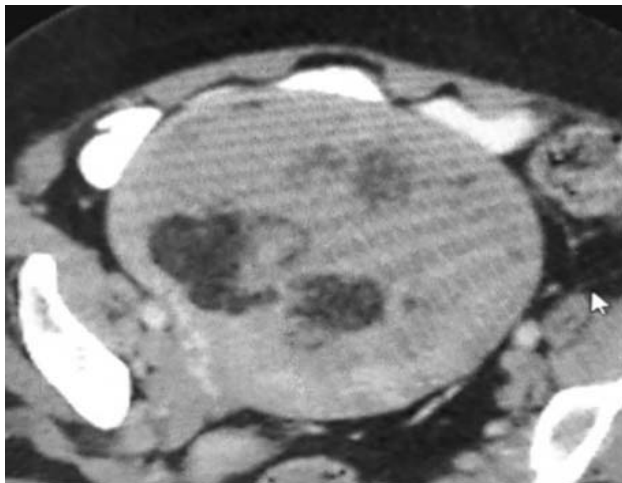


Figure 2: Images of pelvic CT scan axial and sagittal views demonstrating a well defined mixed density lesion arising from the anterior wall of uterus with fatty component.

Discussion

The uterine leiomyoma (fibroids) are most common benign neoplasm of uterus. Histologically they are composed of smooth muscle cells with varying amount of connective tissue elements, while the lipoleiomyoma is distinct variety of leiomyoma that contain the ample amount of adipose tissues. It was first described in 1990 by Meis and Enzinger.¹ The exact etiopathogenesis of this tumor is not known, however most likely represent fatty metamorphosis of smooth muscle cells of leiomyoma. The other proposed theory include proliferation of misplaced embryonic fat cells in the uterine myometrium or proliferation of peri vascular fat cells in the myometrial blood vessels. Number of various lipid metabolic disorders or other associated conditions such as estrogen deficiency as occur in peri and post menopausal period , possibly promote abnormal intracellular storage of lipid.²

This tumor also have similar clinical course and presentation as of other leiomyoma, typically found in post menopausal patients. The large lesions may present with lower abdominal pain, palpable lump or rarely post menopausal bleed. Its size can vary from 3 mm to 30 cm, while the average size ranges from 5 to 10 cm.³ The lipoleiomyoma usually arise from uterine corpus and rarely from cervix and broad ligament. Few cases of ovarian lipoleiomyoma have also been reported in literature. The primary liposarcomas of the uterus are extremely rare and are most likely to arise from malignant transformation of a lipoleiomyoma.⁴

There are number of differential diagnosis for fat containing tumors in the female pelvis, such as benign cystic ovarian teratoma, malignant degeneration of benign cystic ovarian teratoma, benign pelvic lipoma, liposarcoma, extra adrenal myelolipoma in the pelvis and retroperitoneal cystic hamartoma.⁵ Among long list of differentials, the most common is benign cystic ovarian teratoma, which usually requires surgical excision. On the other hand small and asymptomatic uterine lipoleiomyoma can be managed conservatively because of benign nature.

Imaging plays very crucial aspect of the diagnosis in pelvic tumors. Ultrasound is the first imagining modality of choice for diagnosis of pelvic tumor and disease in female. CT and MRI are specific in demonstrating

the uterine origin and fatty component of lipoleiomyoma. MRI is the imaging modality of choice and shows a well-circumscribed mass which is hyperintense on T1 WI with a peripheral hypointense rim. It also appears hyperintense on T2 WI. Confirmation can be done by fat suppression sequence which shows a hypointense mass. Chemical shift imaging, based on the innate differences in the inherent magnetic field experienced by the protons in fat molecules compared with those in water molecules, can also be used for confirmation of fat. Using Dixon method of chemical shift imaging, fat-only image is acquired showing hyperintense fatty component.⁶

It is the final pathological examination that confirms the diagnosis.⁷

Patient's Consent: Informed consent was obtained from the patient to publish the data regarding the case.

Conflict of Interest: Author declared no conflict of interest.

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