

A Rare Case of Uterine Lipoleiomyoma

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ABSTRACT

Lipoleiomyomas are uncommon benign tumours of the uterus and are considered variants of uterine myomas. Their reported incidence varies from 0.03 to 0.2%. Signs and symptoms of lipoleiomyomas are similar to leiomyomas of similar size. Lipoleiomyomas are usually asymptomatic.

They can present with pain, hypermenorrhoea, menstrual irregularities and palpable mass. Lipoleiomyomas when asymptomatic require no treatment. However, it is important to differentiate these tumours from ovarian teratomas, which requires surgical excision.

Keywords: Fat cells, Lipoleiomyoma, Metamorphosis, Uterus

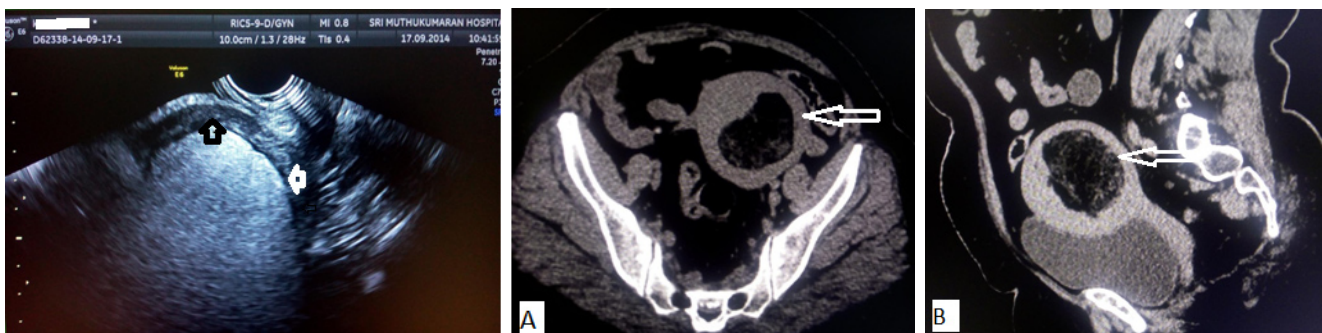
CASE REPORT

We present here a rare case of uterine lipoleiomyoma in a 55 year old postmenopausal lady who presented with lower abdominal pain with recent complaints of bleeding per vaginum. Clinical examination did not reveal any specific signs of an abdominal or pelvic mass. Her routine blood and urine investigations were normal except for mild increase in the blood cholesterol level. Ultrasonogram done transvaginally revealed a large pure hyperechogenic mass measuring 5x6 cm with peripheral hypoechoic halo [Table/Fig-1]. The ovaries and the adnexae appeared normal. No free fluid in the abdomen was seen. Computed Tomography (CT) revealed a large predominantly lipomatous tumour with interspersed areas of subtle isodensity suggestive of mixed smooth muscle components [Table/Fig-2A, B]. A diagnosis of uterine lipoleiomyoma was considered and the patient was referred

for a Magnetic Resonance Imaging (MRI) scan. T1 and T2 weighted MR imaging revealed a well defined hyperintense mass with interspersed areas of hypointensity involving the bulky uterine body and the fundus confirming the diagnosis of uterine lipoleiomyoma [Table/Fig-3A-C]. The patient refused surgery and was lost for follow-up.

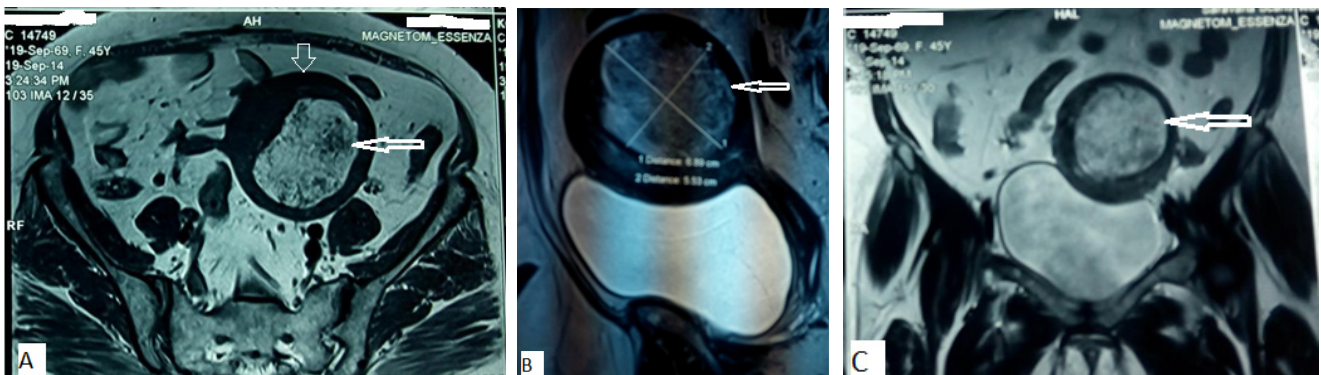
DISCUSSION

Lipomatous uterine tumours are rare; pathologically, they are characterized into three groups. The first group comprises of pure lipomas which are composed of only mature fat cells and is well encapsulated. The second group consists of lipoleiomyomas, angiomyolipomas and fibromyolipomas [1,2]. These are mixed tumours containing various mesodermal components such as adipose tissue, smooth muscle cells, fibrous component and connective tissues. The third and the



[Table/Fig-1]: Transvaginal ultrasonogram image showing a hyperechogenic mass (white arrow) with peripherally compressed myometrium (black arrow) (left)

[Table/Fig-2A,B]: Axial (A) and sagittal (B) plain CT images showing predominantly fat attenuating uterine mass (white arrow) with subtle areas of isodensity within (centre to right)



[Table/Fig-3A-C]: Axial (A), sagittal (B) and coronal T2 weighted (C) MRI images showing hyperintense uterine mass (long white arrow) with peripherally compressed hypointense myometrium (short white arrow pointing down)

rarest group is liposarcoma. Lipoleiomyomas are the most common entity in the above mentioned categories [3]. The uterine lipoleiomyomas are rare fatty tumours with reported incidence of 0.03-0.2% [4]. Lipoleiomyomas have predominant fatty components admixed with smooth muscles & fibrous tissues.

Although most leiomyomas predominantly occur in women of reproductive age, lipoleiomyomas are frequently seen in older women. The mean ages of the patients in the series of Wang et al., [5] and Aung et al., [6] were 53.9 and 59.9 years, respectively. Lipoleiomyomas may rarely be multiple, but often are single, with variations in size [7]. Lipoleiomyomas can occur anywhere in the uterus, in the cervix, the serosal layer or the broad ligament. The most common location is the corpus of the uterus intramurally. As fatty tissue is not a part of normal myometrium, the exact pathogenesis is obscure. Many theories such as fatty metamorphosis, lipomatous degeneration, lipomatous metaplasia of smooth muscle cells, metaplasia in pericapillary pleuri-potential mesenchymal cells, and perivascular extension of peritoneal or retroperitoneal fat along the blood vessels have been suggested [8,9]. The patients with uterine lipoleiomyomas are usually perimenopausal and post-menopausal women with an incidental diagnosis. The signs and symptoms of lipoleiomyomas are similar to the leiomyomas of similar size. Large lesions may present with lower abdominal pain or lump. Uterine lipoleiomyomas presenting with post-menopausal bleed is rare [10]. They can be associated with hyperestrogenic conditions like adenomyosis, endometriosis, endometrial hyperplasia, polyps and gynaecological malignancies [11].

The lipomatous tumours show variable echogenicity on ultrasound. The typical appearance of uterine lipoleiomyoma is a well defined echogenic mass with a peripheral hypoechoic halo which represents compressed myometrium. The main ultrasound differential diagnosis of echogenic uterine mass is ovarian teratoma, especially when the ovary and the uterus are closely applied. Other differential diagnoses of lipomatous

uterine tumours include fibromyolipomas, liposarcomas and benign lipomas [12]. Accurate identification of the uterine origin of the mass can be made by a transvaginal ultrasound scan. CT & MRI may be very helpful in ascertaining internal characteristics of the tumour and its site of origin [13]. Presence of predominantly fat within a uterine mass on CT or MRI is diagnostic of lipoleiomyoma [14]. Uterine lipoleiomyomas typically present as well demarcated hyperintense mass on T1 and T2 imaging with hypointense amorphous bundles within.

Since lipoleiomyoma of the uterus is a rare tumour, a high degree of suspicion and knowledge of the imaging features of the same, would help in making a correct diagnosis. Imaging helps in the diagnosis of lipoleiomyoma and aids excluding other fatty tumours like ovarian teratoma which require immediate surgery [12].

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