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Case Report

Lipoleiomyoma: a case report

Saurav Mittal*, Rajendra Shivde, Shaikh Azhar, Patel Krutik, Shopnil Prasla

Department of Radio Diagnosis, Dr. Vasantrao Pawar Medical College, Aadgaon, Nashik, Maharashtra, India

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***Correspondence:**
Dr. Saurav Mittal,
E-mail: Sauravmittal.cya@gmail.com

ABSTRACT

Lipoleiomyomas are benign tumors of the uterus, with predominant fatty component. It is a variant of leiomyoma. Most commonly seen in peri-menopausal women and is hyperechoic on ultrasound examination. The lesion is mostly asymptomatic and requires no treatment.

Keywords: Lipoleiomyoma, Leiomyoma, Uterus, MRI, USG

INTRODUCTION

Lipoleiomyomas are unusual benign tumors of the uterus. They generally occur in asymptomatic obese women, more common in peri-menopausal age group.[1] It has an incidence of 0.03 to 0.2%.[1-3] The term lipoleiomyoma constitutes lesions with fatty component.[1] Uterine lipoleiomyoma is described as a variant of uterine leiomyoma. Lipoleiomyomas were first described by Lobstein in 1816.[4] It was previously called as fatty metamorphosis lipomatous degeneration, adipose metaplasia, etc. It is now regarded as a distinct true benign neoplasm.[5,6]

A number of various lipid metabolic disorders or other similar conditions, which are associated with estrogen deficiency as seen in peri or postmenopausal period, possibly stimulate abnormal intracellular storage of lipids.[1,4]

CASE REPORT

A 52 years old post menopausal female came with lower abdominal pain for sonographic evaluation. There was no menstrual complaints, no bladder or bowel complaints.

USG findings

On trans vaginal sonography, there was a well defined homogeneous hyper-echoic lesion measuring 23.5 × 20.8 mm noted in the posterior wall of uterine myometrium. The lesion had no intra-tumoral vascularity.

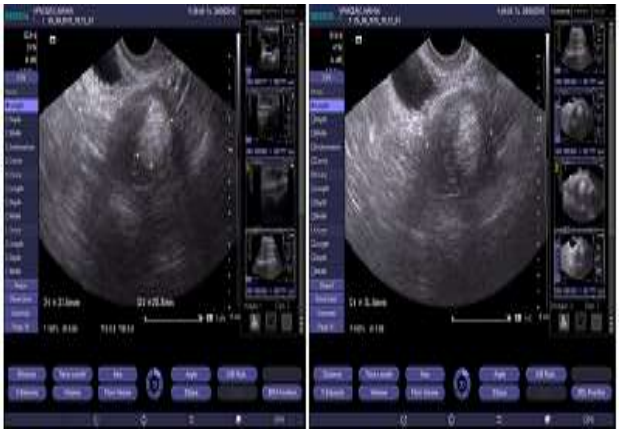

Figure 1: Well defined hyperechoic lesion in the posterior uterine wall with no vascularity on colour doppler study.

MRI findings

MRI was conducted on the Siemens magnetom essenza 1.5 Tesla machine.

MRI sections were obtained. The lesion was completely intra-mural with no endometrial or serosal extension. The lesion was hyperintense on T1WI and iso to hyperintense on T2WI. On fat suppressed T1WI and STIR images there was signal dropout, which confirmed the diagnosis.

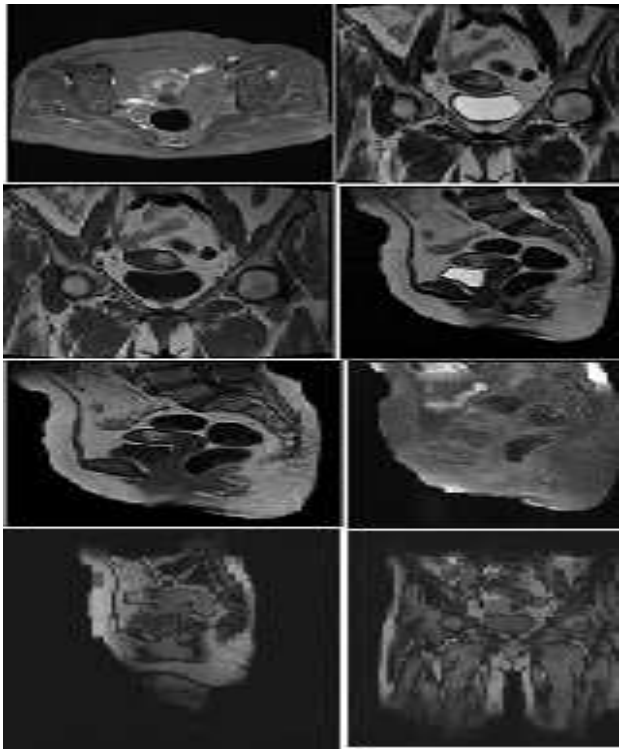

Figure 2: In the above figures, on T1WI, the lesion appears hyperechoic, while on T2WI, the lesion is iso to hyperechoic and on fat saturation images, there is signal drop out, confirming the fatty nature of the lesion.

DISCUSSION

Lipoleiomyomas are unusual benign tumors of the uterus. These tumours generally occur in asymptomatic obese perimenopausal women.[1,3] Lipoleiomyoma is composed of an intimate admixture of mature smooth muscle cells and adipocytes, often with smooth muscle cells being predominant, most commonly found in the uterine corpus.[4,7] It can be endophytic or exophytic.

The origin of the lipomatous tumour is controversial and different theories have been proposed:

- Misplaced embryonal mesodermalrests.
- Lipoblast or pluripotential cells migrating along uterine arteries and nerves.
- Adipose metaplasia of stromal or smooth muscle cells in leiomyoma
- They probably represent tumor metaplasia within a leiomyoma.

Pathologically, lipomatous tumors of the uterus can be classified into three types –
Type I –Lipoma
Type II – Lipoleiomyoma, Angiomyolipoma
Type III –Liposarcoma.

Amongst these lipomatous lesions, lipoleiomyoma is the most common tumor.[8]

The differential diagnoses of similar uterine tumours with adipose tissue include spindle cell lipoma, angiolipoma, angiomyolipoma, leiomyoma with fatty degeneration, atypical lipoma, and well differentiated liposarcoma.[4,5]

The histological structure and immunohistochemical profile suggest that the lipoleiomyomas probably result from a metaplasia of the smooth muscle cells more than a true neoplastic process.

Imaging features

USG **–**The lesion appears to be markedly hyperechoic and is oval to round in shape.[7]

MRI –Lipoleiomyoma appears hyperintense on T1 and hypointense on T2. Fat saturation technique is used to confirm the diagnosis of lipoleiomyoma.[8] The lesion appears suppressed on fat saturation images.[7]

Lipoleiomyomas are mostly asymptomatic and needs no treatment.[9]

CONCLUSION

Uterine lipoleiomyomas are rare benign tumors of uterus that are seen in peri-menopausal age group. It is easily diagnosed by USG but fat saturation MRI is confirmatory for the diagnosis. Although it is a rare tumor, it should be considered in the differential diagnosis of hyper-echoic leiomyomas of the uterus.

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