

# An Incidental, Asymptomatic Lipoleiomyoma in a Post-Menopausal Woman: A Case Report

Tanvi R Warty<sup>1</sup>, Shilpa N Chaudhari<sup>2</sup>, Himadri Bal<sup>3</sup>, Archana A Ashtekar<sup>4</sup>, Shreya Karan<sup>1</sup>

<sup>1</sup>Postgraduate Student, Department of Obstetrics and Gynecology, Pad. Dr. D.Y. Patil Medical College, Pimpri, Pune, Maharashtra, India,

<sup>2</sup>Professor, Department of Obstetrics and Gynecology, Shrimati Kashibai Navale Medical College and General Hospital, Narhe, Pune,

Maharashtra, India, <sup>3</sup>Professor, Department of Obstetrics and Gynaecology, Pad. Dr. D.Y. Patil Medical College, Pimpri, Pune, Maharashtra,

India, <sup>4</sup>Lecturer, Department of Obstetrics and Gynecology, Pad. Dr. D.Y. Patil Medical College, Pimpri, Pune, Maharashtra, India

## Abstract

Benign tumors of uterus are commonly seen in reproductive age. Commonly these patients have associated menstrual complaints. In different variants of leiomyoma, lipoleiomyomas of the uterus are rare and often asymptomatic entities. Incidence of lipoleiomyoma is 0.03 to 0.2%. In post-menopausal women incidence of leiomyoma is 1:1000 that is <10%, which is more often a precursor of leiomyosarcoma than of a benign origin. The signs and symptoms produced by lipoleiomyoma, diagnosis and management, are similar to that of leiomyoma. Distinct radiological characteristics and demonstrable histology make them easy to diagnose. They have a good prognosis. Most of the cases diagnosed postoperatively after histopathological reports.

**Keywords:** Lipoleiomyoma, Menopause, Uterus

## INTRODUCTION

Lipomatous uterine tumors are unusual benign neoplasms.<sup>1,2</sup> A perusal of English literature revealed only approximately 140 cases of lipoleiomyoma.<sup>3</sup>

These tumors generally occur in asymptomatic obese perimenopausal or menopausal women.<sup>4</sup> Most of the reported cases of lipoleiomyoma have been retrospectively diagnosed after surgery, with some being pre-operatively misdiagnosed as ovarian teratomas.<sup>5,6</sup> Lipoleiomyoma is located in 83% of the cases in uterine corpus.<sup>7</sup> However incidence of lipoleiomyoma in the cervical region is also reported in the literature.<sup>8</sup>

Purpose of reporting this case is the patient presented with complaints of locomotor system and there were no associated gynecological complaints, along with an

incidental finding of lipoleiomyoma in ultrasonography of pelvis which was confirmed on magnetic resonance imaging (MRI) of the lumbar region and because of its rarity.

## CASE REPORT

A 63-year-old post-menopausal woman referred from orthopedic ward for incidental finding of lesion in uterus of lipoleiomyoma in ultrasonography of pelvis that was confirmed on MRI. She had Grade I retrolisthesis of lumbar 5 over sacral 1 vertebral body. She was admitted for complain of pain in back and bilateral lower limbs since 6 months. This was not associated with any menstrual, bowel or bladder related complaints. She was a recently diagnosed case of Type II diabetes mellitus and hypertension and was on treatment since 15 days. On examination, she was an obese woman, body mass index of 35 with no evidence of pallor, edema or lymphadenopathy. Her pulse rate was 90 beats/min and had a regular rhythm, good volume and was bilaterally symmetrical. Her blood pressure was 140/98 mmHg in the right arm in the supine position.

On abdominal palpation, she had no evidence of tenderness, guarding or rigidity. The uterus was just palpable above the pubic symphysis. No other organomegaly was detected. On

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## Corresponding Author:

Dr. Shilpa N Chaudhari, 43, Yashashree Society, Near MIT Engineer College, Paud Road, Pune - 411 038, Maharashtra, India.

Phone: +91-9422526945. E-mail: drshilpachaudhari@yahoo.com

vaginal examination, the uterus was anteverted, 10-12 weeks in size and bilateral fornices were free and non-tender. Her complete blood count, blood sugar profile, hepatic and renal function tests and coagulation profile were within normal limits. Her chest X-ray PA-view, electrocardiogram and 2D-Echo revealed no abnormalities.

Her ultrasonography of the abdomen and pelvis revealed a large echogenic lesion arising from the uterus measuring 7.9 cm × 6.8 cm with high-fat content. Her MRI (abdomen and pelvis with contrast) showed a well-defined lesion of 7.8 cm × 5.8 cm × 7.2 cm seen in the left postero-lateral myometrium. Lesion is heterogeneously hyperintense with multiple hypointense areas seen within. Lesion shows suppression of the signal on T1 FAT SAT images suggestive of fat content within (Figure 1). Her mammography, CA-125 and CA-19.9 levels were within normal limits. With appropriate counseling and consent, the patient was accepted for a total abdominal hysterectomy with bilateral salpingo-oophorectomy. Intraoperatively, a 9 cm × 7 cm fibroid was noted arising from the uterine fundus (Figure 2). Incidental Meckel's diverticulum was noted, and a diverticulectomy was done. The post-operative period was uneventful.

The histopathology report demonstrated a uterus with atrophic endometrium and a postero-fundal lipoleiomyoma. Microscopically, the mass was composed of smooth muscle tissue divided into lobules by connective tissue septa. Clusters of adipose tissue were interspersed in lobules and separated by thin septa, thus confirming the pathological diagnosis (Figure 3).

## DISCUSSION

Lipoleiomyomas are a rare occurrence with their incidence ranging from 0.03% to 0.20% amongst the leiomyomata of the uterus.<sup>9,10</sup> Although most commonly found in the uterine body, lipoleiomyomas are not strictly restricted to the uterus, but have been reported in the cervix, ovary, broad ligament and retroperitoneum as well.<sup>11,12</sup>

The origin of lipoleiomata of the uterus has been subjected to wide speculation. However, recently proposed theories have included the misplacement of embryonic fat cells, direct metaplasia of smooth muscle or connective tissue cells into fat cells and proliferation of accompanying perivascular fat cell into blood vessel, inclusion of the fat cells in the uterine wall during surgery, or fatty infiltration of degenerated connective tissue.<sup>13</sup> Pathologically, lipomatous tumors of the uterus have been categorized into 3 distinct groups (viz) pure lipomas composed of encapsulated mature fat cells, lipomas with various mesodermal components such as lipoleiomyomas, angiomyolipomas and fibromyolipomas and the rarest

category of malignant neoplasms like liposarcoma, which consist poorly differentiated fat cells undergoing sarcomatous change.<sup>9</sup>

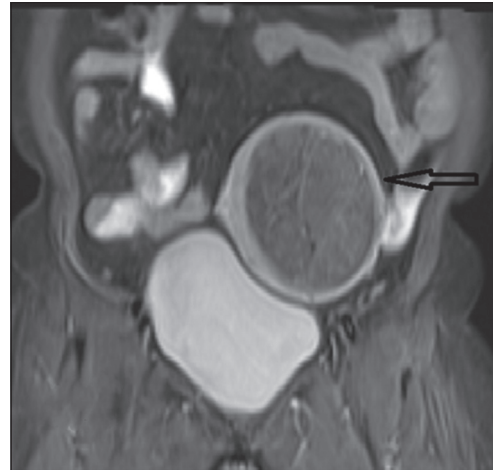


Figure 1: Magnetic resonance imaging arrow suggestive of lipoleiomyoma of uterus

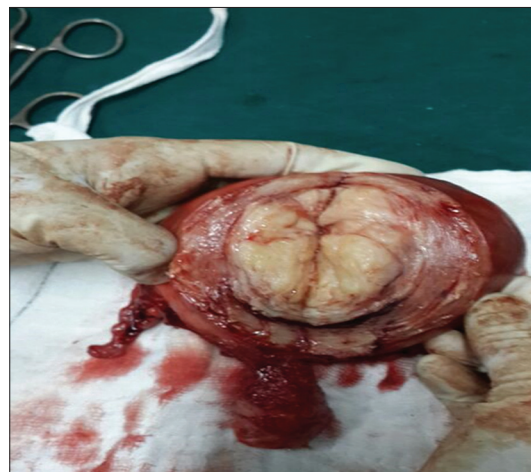


Figure 2: Gross specimen showing yellowish colored leiomyoma in uterus

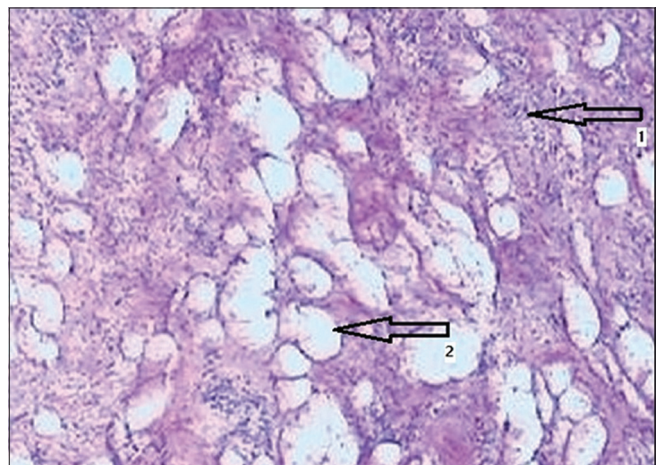


Figure 3: Microscopic view arrow 1 showing myometrium and arrow 2 showing adipocytes

Uterine lipoleiomyomas occur most commonly in the age group of 50-70 years in post-menopausal women. On gross examination, they are usually well-circumscribed, yellowish and soft in consistency, with a thin capsule and found most commonly in the posterior wall of the corpus uteri.<sup>14</sup> The average size is 5-10 cm, but cases have been reported with masses up to 32 cm in diameter.<sup>9</sup> While most cases are asymptomatic, large lesions may present with symptoms of pelvic discomfort, heaviness and abnormal uterine bleeding.

Diagnosis is based on radio imaging techniques and histo-pathology. MRI including fat suppression sequence demonstrates a high specificity and sensitivity to fat and it's multi-sectional ability helps determine the precise location, thus making it a key tool in the pre-surgical diagnosis of lipoleiomyomata of the uterus.<sup>9</sup> The differentiation of these neoplasms on ultrasonography and computed tomography scans is difficult, but feasible at times when the mass is large enough, the distinction between the tissues is rendered possible. The characteristic sonological appearance of a lipoleiomyoma is the presence of a hyperechoic rind, which is presumed to represent a layer of myometrium surrounding the fatty component.<sup>6</sup> The differential diagnosis is limited to benign cystic ovarian teratomas, ovarian lipomas or possibly ovarian lipoleiomyomas.<sup>15</sup>

Malignant lipomatous tumors originating primarily from the uterus are a rare phenomenon and their sporadic association with endometrial carcinoma remains statistically unproven. In conclusion, lipoleiomyomas of the uterus are exceedingly rare and often misdiagnosed entities, with clinical manifestations similar to leiomyomas with distinct radiological characteristics and demonstrable histology, having excellent prognosis.<sup>13</sup>

## CONCLUSION

Asymptomatic post-menopausal women with lipoleiomyoma are easy to manage as it has same management as any other type of leiomyoma. Challenge lie in proper diagnosis,

counseling patient for treatment. Even though, chances of conversion of benign tumor to malignant is very rare as post-menopausal status there is a need of hysterectomy is indeed. In this regard we believe strongly in subjecting post-menopausal women for routine screening in terms of general, gynecological and breast examination, along with investigations as pap smear, ultrasonography of pelvis and mammography. With general awareness in women we can diagnose not only malignant conditions, but can also take care of benign conditions.

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