

# Uterine Lipoleiomyomas: A Report of Two Cases with a Brief Review of Literature

REECHA SINGH, BIPIN KIMAR, RAMACHANDRA V. BHAT, GOWRI DORAIRAJAN

## ABSTRACT

Lipomatous uterine tumours are unusual benign neoplasms. We report here two cases of uterine lipoleiomyoma because of its rarity and we attempt to briefly review the literature of this distinctive lesion. These two lipoleiomyoma occurred in post-

menopausal women aged 58 and 60 years and size ranged from 1.5 to 9.5 cm. Histologically, they were composed of variable amounts of smooth muscle, fat cells, and fibrous tissue. In one case, there was widespread infiltration of the lipoleiomyoma by numerous small mature lymphocytes.

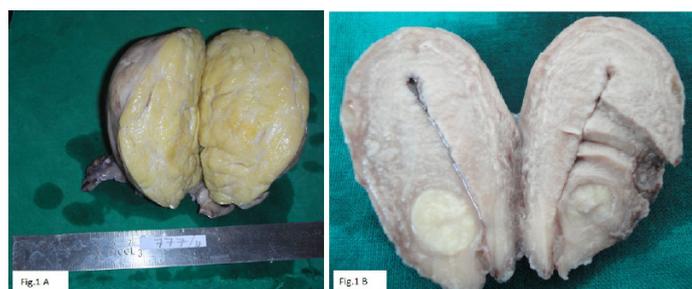
## INTRODUCTION

Lipomatous uterine tumours are unusual benign neoplasms [1,2] Histologically, these tumours comprise a spectrum including pure lipomas, lipoleiomyomas and fibrolipomyomas. Uterine lipoleiomyoma is a rare benign tumour occurring primarily in obese perimenopausal and post menopausal women. The reported incidence varies from 0.03% to 0.2% of leiomyomas [3]. The signs and symptoms are similar to those caused by leiomyomas of the same size, such as a palpable mass, excessive menstrual bleed, and pelvic pain. Most patients are asymptomatic [4]. We report here two cases of lipoleiomyoma that arose in the uterus in view of the rarity of this tumour and its interesting histogenesis.

## CASE HISTORY

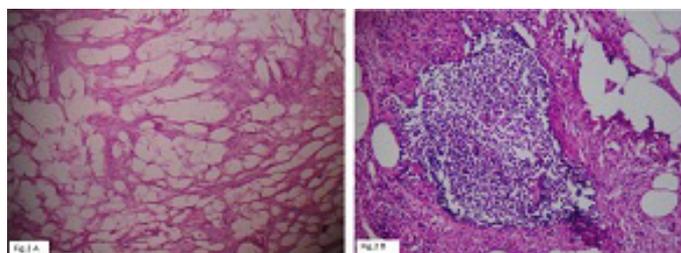
### Case 1

A 58-year-old multiparous, hypertensive postmenopausal woman presented with difficulty in passing urine for two months. On examination, uterus was irregularly enlarged to 14 weeks size, there was mild cystocele and first degree descent of cervix. Abdominal hysterectomy with bilateral salpingo-oophorectomy and abdominal repair of cystocele was carried out. Uterus with cervix and both the ovaries were received for histopathological examination. On gross examination, uterus with cervix measured 10x10x8cm. Ectocervix and endocervix appeared unremarkable. Cut section of the uterus showed endometrial cavity obliterated by a tumour measuring



**[Table/Fig-1A&B]:** Gross photograph of pathology specimens (1A) shows extensive yellow areas (1B) shows an intramural lipoleiomyoma of 1x1.5x1.5 cm, with gray white and yellow areas

**Key Words:** Lipoleiomyoma, Uterus, Postmenopausal



**[Table/Fig-2A&B]:** Mature adipocytes intermingled with benign smooth muscle cells, consistent with a uterine lipoleiomyoma. Lipoleiomyoma with infiltration by numerous small mature lymphocytes

9.5x9x9cm. Cut section showed an intramural tumour with firm grey white surface and extensive soft, yellow, glistening areas [Table/Fig-1A]. Paraffin embedded sections were prepared from the tumour and stained with hematoxylin and eosin. Microscopically, the sections from the tumour showed benign smooth muscle cells intermingled between lobules of mature adipocytes [Table/Fig-2A]. Sections from endometrium showed cystic atrophy. Cervix was unremarkable.

### Case 2

A 60-year-old multiparous postmenopausal woman presented with history of mass descending from vagina for one year. There was no history of excessive bleeding during the menopausal transition. On examination, there was uterovaginal prolapse with the cervix lying 4 cm outside and moderate cystocele and rectocele. Vaginal hysterectomy with pelvic floor repair was done and uterus with cervix was received for histopathological examination. On gross examination, cut surface of uterus showed a single intramural leiomyoma of 1x1.5x1.5 cm, with gray white and yellow areas [Table/Fig-1B]. Cervix appeared epidermidized. Paraffin embedded sections were prepared from the tumour and stained with hematoxylin and eosin. Microscopically, the sections from the tumour showing benign smooth muscle cells intermingled between lobules of mature adipocytes and widespread infiltration of the tumour by numerous small mature lymphocytes [Table/Fig-2B]. Sections from endometrium showed cystic atrophy. Cervix revealed proclinal changes.

## DISCUSSION

Lipoleiomyoma is an unusual fatty tumour. Uterine lipoleiomyomas are most frequently found in the uterine corpus and are usually intramural as in our case. However, lipoleiomyomas can be found anywhere in the uterus or cervix and may be subserosal [5]. They are composed histologically of variable amounts of smooth muscle, fat cells, and fibrous tissue. Fatty metamorphosis of smooth muscle cells of leiomyomas is the most likely cause for the development of lipoleiomyomas [6]. Pathogenesis has been variously ascribed to as mixed, benign, heterologous or mesenchymal neoplasm [7]. A number of various lipid metabolic disorders or other associated conditions, which are associated with estrogen deficiency as occurs in peri- or post-menopausal period, possibly promote abnormal intracellular storage of lipids [1]. In his study Tereda described that the fatty tissue is not degenerative but active proliferative tissue and the presence of estrogen and progesterone receptor status pointing towards the fact that the fat is specific female genital tract fat [8].

The differential diagnosis of the lipomatous mass in the pelvis includes benign cystic teratoma, malignant degeneration of cystic teratoma, non-teratomatous lipomatous ovarian tumour, benign pelvic lipoma, liposarcoma [9,10] and lipoblastic lymphadenopathy. In our first case MRI was not done. In the case reported by Fujiwaki R, [11] pre-operative MRI had raised the suspicion of liposarcoma. Our first case was operated in view of the size, bladder pressure symptoms and the post-menopausal status adding to the suspicion of sarcoma. The lesion is benign and the only puzzle for the pathologist could be the unexpected presence of fat in a uterine tumour [12]. The diagnosis of primary pure lipoma on histopathology should be made only if the smooth muscle cells are confined to the periphery unlike our case which showed an admixture of both components [13]. Most of them are post-operative incidental findings and the diagnosis is made on histopathological examination. Association of lipomatous uterine tumours and endometrial carcinomas with lipoleiomyosarcoma arising in uterine lipoleiomyomas has been reported [14].

In one of our case, there was widespread infiltration of the lipoleiomyoma by numerous small mature lymphocytes. G. McClean and W.G. McCluggage have described extensive and widespread infiltration of the leiomyoma by numerous small mature lymphocytes in patients who had been treated preoperatively with gonadotropin releasing hormone (GnRH) agonists [15]. However in our case there was no history of GnRH therapy. It is well known that GnRH agonist

can produce menopause like state. The hypoestrogenism induced by menopause as in our case or by gonadotropin releasing hormone agonist as in their case could be responsible for sudden shrinkage of tumour and infiltration with small mature lymphocytes.

We conclude that with increased awareness among pathologists probably more unusual morphological features of lipoleiomyomas will be identified. Further research needs to be done to determine the histogenesis of this tumour.

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