



## Case Report

### PRIMARY PURE LIPOMA OF THE UTERUS-A CASE REPORT

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#### ABSTRACT

Pure lipoma of the uterus is a rare entity and only few cases have been reported in the literature. They usually develop in postmenopausal women. Clinical symptoms and physical signs are similar to those found in uterine leiomyomas. The histogenesis of these lesions is still unclear. Preoperative diagnosis is difficult and should be confirmed postoperatively on histopathology. We report a case of pure uterine lipoma in a 52 year old woman who presented with abdominal pain and intermittent vaginal bleeding.

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#### INTRODUCTION

The incidence of uterine fatty tumors varies from 0.03-0.2% (Garg, Sudhamani *et al.*, 2013). The presence of fat in the uterine corpus is not exceptional and some leiomyomas have an adipose tissue component, in variable proportions. These cases are known as lipoleiomyomas (Jacobs, Cohen *et al.*, 1965), and certain authors consider them to be hamartomatous lesions (Mckeithen, Shinner *et al.*, 1964). On the other hand, lipomas are those tumors that are exclusively comprised of mature adipose tissue. The diagnosis of pure lipoma should only be made when smooth muscle, if any, is confined to the periphery of the tumor (Fernandes, Naik *et al.*, 2007). The clinical manifestations do not usually differ greatly to those caused by leiomyomas except that they usually affect postmenopausal women (Villalonga, Garcia, 2009). Most lipomas are located in the body of the uterine corpus. Diagnosis is accomplished after histopathological analysis, although some radiological techniques may indicate their existence prior to surgery (Houser Carasco *et al.*, 1979). They have an excellent prognosis.

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#### Case Report

A 52 year old female presented with abdominal pain and intermittent postmenopausal vaginal bleeding since 6 months. Gynaecological examination revealed a bulky uterus. Ultrasound abdomen was suggestive of leiomyoma uterus. Total abdominal hysterectomy with bilateral salpingo-oophorectomy was done and the specimen was subjected to histopathological evaluation.

On gross examination, the uterus measured 9x6x4 cm. Cut surface revealed a well circumscribed intramural yellow mass measuring 6x5x3 cm. The mass was seen obliterating the endometrial cavity with a thin rim of the myometrium at the periphery. Both fallopian tubes and ovaries were unremarkable.

Microscopic examination revealed a benign tumor composed of mature adipocytes separated by thin fibrovascular septae. Myometrium showed no features of leiomyoma. There was no evidence of atypia or malignancy noted in the adipocytes. Endometrium was basal. Cervix, both tubes and ovaries were unremarkable.

A diagnosis of pure uterine lipoma was made.



Fig. 1. Gross examination-Cut surface of uterus showing a yellow tumor obliterating the endometrial cavity

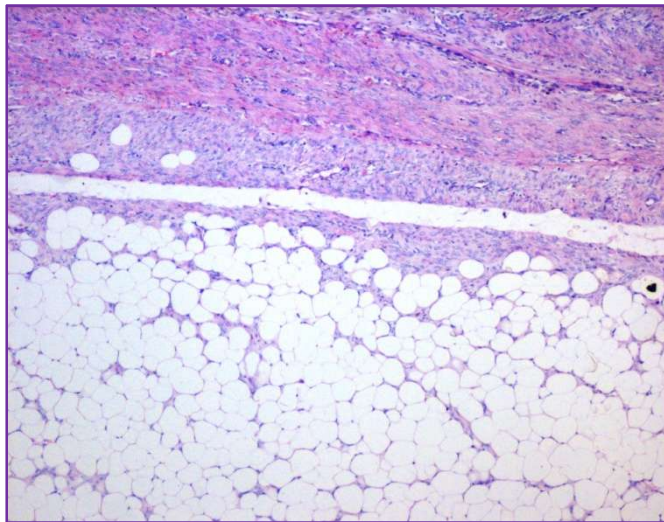


Fig. 2. Photomicrograph showing benign mature adipose tissue tumor (lipoma) with compressed myometrium at the periphery (H&E, 4X)

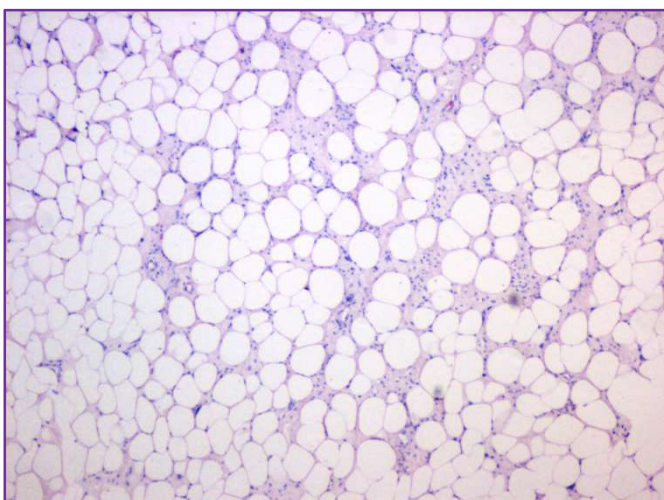


Fig. 3. Pure lipoma composed of mature adipose tissue separated by thin fibrovascular septae (H&E, 10X)

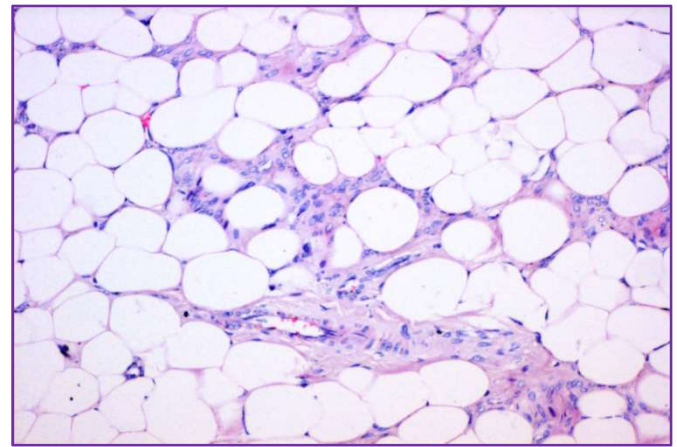


Fig. 4. Uterine lipoma showing mature adipose tissue separated by fibrovascular septae (H&E, 40X)

## DISCUSSION

Lipomas of the uterine corpus are extraordinarily rare entities and, since they were first described by Lopstein in 1816 (Al-Maghrabi, Sait *et al*, 2004), somewhat less than 20 cases have been published in their pure form. Their clinical manifestation is identical to that caused by leiomyomas. Most cases first present with uterine bleeding, and later with abdominal pain when these tumors reach larger dimensions. Lipomas of the uterine corpus usually appear in women with a higher mean average age than is common for leiomyomas, mainly after menopause. Cases are usually diagnosed after histological analysis of the surgical specimen, although some works have also appeared in which certain radiological techniques could indicate their existence before surgery (Villalonga, Garcia, 2009). Pure lipomas are well encapsulated tumors showing mature adipocytes interspersed by thin fibrous septae. Myometrium is thinned out with few fibers of smooth muscle cells at the periphery of the tumor. It can be confused preoperatively with leiomyoma (most common), ovarian teratoma or lipoleiomyoma (Garg, Sudhamani *et al.*, 2013).

The histogenesis of these lipomatous tumors in the uterine wall continues to be an enigma. As fat tissue is not native to the uterus, various theories of histogenesis have been proposed. These include misplaced embryonic fat cells, metaplasia of the muscle or connective tissue cells into the fat cells, lipocytic differentiation of specific primitive connective tissue cells, proliferation of perivascular fat cells accompanying the blood vessels into the uterus, inclusion of the fat cells into the uterine wall during surgery or fatty infiltration or degeneration of the connective tissue (Villalonga, Garcia, 2009). The fact that most patients are postmenopausal women leads to the suggestion that fat metabolism changes in this stage may play a role in lipomatous metaplasia (Lin, Sheu *et al.*, 1999).

A morphological and histological analogy has been drawn between uterine fatty tumors and renal angioliopomas explaining these tumors as hamartomas or most recently choristomas (Bandopadhyay, Ray *et al.*, 2010).

Certain associations have been seen between uterine lipomas and endometrial polyps and more rarely with carcinoma

(Villalonga, Garcia, 2009). Pure lipomas can attain huge size before coming into clinical attention and are usually mistaken for carcinomas due to the old age of the patient, rapid progression, and pressure effects. The diagnosis of primary pure lipoma on histopathology should be made only if the smooth muscle cells are confined to the periphery (Vamseedhar, Shivalingappa *et al.*, 2011).

### Conclusion

To conclude, pure uterine lipomas are extremely rare, present with clinical manifestations similar to leiomyoma, have an excellent prognosis and can be considered for the differential diagnosis of uterine mass in postmenopausal women.

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