

Uterine Lipoleiomyoma

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Abstract

Uterine fibroids or leiomyomas are benign tumors of the uterine smooth muscle. A rare form of these tumors is uterine lipoleiomyoma - benign tumor consisting of a mixture of adipocytes and smooth muscle cells. Lipoleiomyomas of the uterus are typically found in peri and postmenopausal women. Here, we report a case of lipoleiomyoma in a 36 year old woman. We report this case of uterine lipoleiomyoma because of its rarity.

Keywords: Lipoleiomyoma, Uterus, Postmenopausal, Adipose Tissue, Smooth Muscles.

Introduction

Lipoleiomyoma is one of the rarest benign neoplasms of uterus; reported incidence varies from 0.03% to 0.2% [1]. Lipoleiomyomas of the uterus are typically found in postmenopausal women. Many of these patients are asymptomatic, but in some patients symptoms are similar to those of uterine leiomyomas, such as pelvic discomfort, heaviness and pressure or vaginal bleeding. The tumor consists of long intersecting bundles of bland, smooth muscle cells admixed with nests of mature fat cells and fibrous tissue [2, 3]. Pre-operative diagnosis is possible using radiological imaging studies, such as ultrasound or computed tomography scanning of pelvis, but the condition may be mis-diagnosed as an ovarian teratoma or even another uterine neoplasm [4].

Case Report

A 36 year old woman attended the Gynecology department for menorrhagia and abdominal pain. Hysterectomy was done. On gross examination seen already cut opened specimen of uterus with a large fibroid measuring 13x10x6 cm. Fibroid on cut section showed whorled appearance. Histopathological examination revealed the tumor as lipoleiomyoma,

consisting of smooth muscle cells and matures adipose tissue (Figure 1).

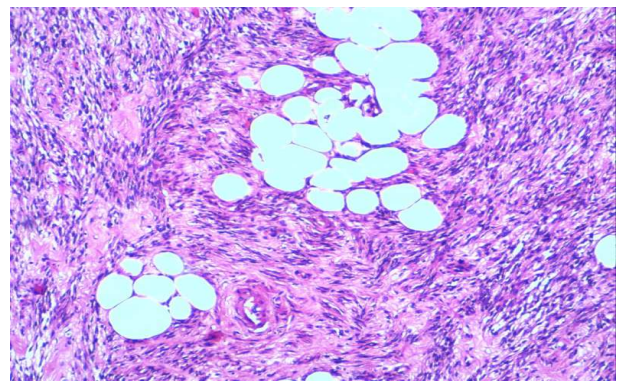


Figure 1: Lipoleiomyoma showing mixture of adipose tissue and smooth muscle

Discussions

Most leiomyomas predominantly occur in women of reproductive age and regress after the menopause, lipoleiomyomas usually occur in obese perimenopausal and post-menopausal women between 50 and 75 years of age. It is extremely uncommon under 40 Years [5]. Shanti Sri A reported a case of lipoleiomyoma in 26 years old lady [6] while uterine lipoleiomyoma was also seen in few patients older than 80 years of age [7]. In

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our case patient is 36 years old. Zaibun Nisa et al. also reported a case of lipoleiomyoma in 37 years old lady [8].

Clinically it is indistinguishable from other benign uterine neoplasms and may be asymptomatic or can present as pelvic mass with or without pain and menorrhagia [7].

Most of uterine lipoleiomyoma are diagnosed only after surgery or autopsy. However, newer imaging techniques are helpful in their preoperative diagnosis. Identification of fat within a uterine mass is a key to the diagnosis. USG, CT and MRI are the essential methods of diagnosing uterine lipomatous tumor. The first preoperative study on a case of uterine "fatty" tumour has been described by Jacobs and Markowitz in 1988 [9]. The characteristic sonological appearance of lipoleiomyoma is the presence of hyperechoic mass encased by hypoechoic rind [10].

Though imaging plays an important role in preoperative diagnosis and localization of the lipoleiomyoma, it is the final histopathological examination that confirms the diagnosis. Finding an admixture of mature adipocytes and smooth muscle cells on microscopy is required to designate a neoplasm as lipoleiomyoma.

Uterine lipoleiomyomas are most frequently found in the uterine corpus and are unusually intramural but can found anywhere in the uterus or cervix and can also be subserosal in location [11]. Few of these tumors are seen arising in cervix [12] and from parametrium in broad ligament [13]. These may be single or multiple, usually measuring 5-10 cm but can range from few mm to 32 cm in size [14]. A giant lipoleiomyoma is reported by Akanksha Jain [15]. In our case it was a single intrauterine mass measuring 13x10x6 cm and was present in corpus of uterus.

These tumors may contain microscopic foci of adipocytes resembling regular leiomyomas in gross appearance, or may have high amounts of adipocytes resulting in yellow and lobulated cut surface [16]. The tumor in our case was not looking yellow on gross examination but showed reasonable amounts of adipocytes on microscopy to designate it as lipoleiomyoma.

Lipoleiomyoma is an unusual fatty tumour of uterus. Uterine fatty tumours (UFT) or lipoleiomyomas (LLM) are a kind of leiomyomas composed of both fatty

component and smooth muscles. Since first description by Lobstein in 1816 until 1966 only 131 cases of lipomatous uterine tumours (UFT) were initially reported. From the 70's up to date this number has been progressively growing to at least 357 cases around the world [17].

Lipoleiomyomas are composed histologically of variable amounts of smooth muscle, fat cells, and fibrous tissue.

Pathologically, lipomatous tumours of uterus are categorized into three groups,

1. Pure lipoma composed only of mature fat cells and is encapsulated.
2. Mixed type - Lipoleiomyoma, angiomyolipoma, fibromyolipoma etc along with various mesodermal tissue components adipose tissue, smooth muscles, fibrous component and connective tissue.
3. Malignant neoplasm like liposarcoma consisting of less differentiated fat cells that have undergone sarcomatous change.

Pure lipomas and liposarcoma of uterus are very rare and most of the reported cases are mixed type and lipoleiomyoma is the most common [18].

The histogenesis of lipoleiomyomas is still controversial and many theories are proposed [19]:

- (1) Adipose metaplasia of smooth muscle or connective tissue into fat cells.
- (2) Lipoclastic differentiation from misplaced embryonic fat cells.
- (3) A tumour arising from misplaced embryonic remains of lipoblasts.
- (4) Proliferation of perivascular fat cells accompanying the blood vessels into the uterus.

It is suggested that 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 may be the reason for lipoleiomyomas in postmenopausal female[20].

Conclusion

Lipoleiomyoma is a rare benign tumor of the uterus and difficult to clinically distinguish it from a leiomyoma. A pre-operative diagnosis of lipoleiomyoma can be suspected in a postmenopausal woman with hyperechoic uterine lesion with a hypoechoic rim. The diagnosis is confirmed only by tissue diagnosis. We present this case for rarity and presentation at early age.

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