

Lipoleiomyoma of Uterus: Uncommon Incidental Finding

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Abstract

Fatty tumours of the uterus are exceedingly rare. Lipoleiomyoma of the uterus is a rare benign uterine tumour thought to be a variation of leiomyoma. The presence of fatty tissue in the myometrium is anomalous, interpreted as lipomatous degeneration, smooth muscle metaplasia or as a benign tumour called as lipoleiomyoma. Imaging can play an important role in determining the intrauterine location and fatty nature of lipoleiomyomas but most of these are detected by chance pathological findings postoperatively. We report a case of lipoleiomyoma in anterior uterine wall in 66 years old postmenopausal female, who presented with postmenopausal bleeding.

Keywords: Uterus; Lipoleiomyoma

Introduction

Fatty tumours primary to the uterus are very uncommon and almost invariably benign [1]. The incidence varies from 0.03% to 0.2% [2,3]. Lipoleiomyoma is a benign soft tissue tumour which was first described in 1991. They usually occur within the abdominal cavity and retroperitoneum, although it may also be found in the subcutis and muscular fascia [4]. Lipoleiomyoma is a tumour comprised of smooth muscle cells along with diffuse and scattered lobules of adipose tissue showing whorling at places. These tumours are seen in uterus as intramural growths but rarely may be seen arising in cervix and from parametrium in broad ligament [5].

A Case Report

A 66 years old, postmenopausal women with gravida 5, para 5 presented with complaints of irregular bleeding per vagina and an abdominal lump gradually increasing in size since 6 months. She attained menopause at 52 years of age. On per vaginal examination, uterus was found to be anteverted. Ultrasonography revealed a uterine mass in the anterior wall measuring 3.6×3.3 cm. Bilateral ovaries and adnexa were unremarkable. Total abdominal hysterectomy with bilateral salpingo oophorectomy with omental biopsy was performed and sent for histopathology. Grossly, on cutting open the uterine cavity a well circumscribed gray yellow mass measuring 4×3.5 cm was present in the anterior uterine wall (Figure 1). Microscopically, the tumour was composed of mature adipose tissue divided into lobules by thin connective tissue septa. There was no true tumour capsule but adjacent myometrium was compressed around the tumour providing a false capsule. Irregularly dispersed amongst the adipocytes were single and small clusters of smooth muscle cells. In some areas smooth muscle component can be identified only after careful searching while in other areas readily apparent (Figure 2). Immunohistochemically, the smooth muscle fibers intervening the adipose tissue were positive for desmin and smooth muscle actin, thus confirming the diagnosis of lipoleiomyoma. No other abnormal histopathological findings were noted. Simple hysterectomy was done. Patient was kept on follow up.

Discussion

Lipomatous uterine tumour is an uncommon neoplasm with incidence ranging from 0.03% in hysterectomy specimens to 0.20% amongst uterine leiomyomas [1,2]. Lipoleiomyomas have also been reported in cervix, broad ligament, retroperitoneum and ovary [3,5]. Pathologically, lipomatous tumours of uterus are categorized into three groups, firstly pure lipoma composed only of mature fat cells and is encapsulated, second group of lipoleiomyoma, angiomyolipoma, fibromyo lipoma etc along with various mesodermal tissue components

as adipose tissue, smooth muscles, fibrous component and connective tissue and thirdly, the rarest group including malignant neoplasm like liposarcoma consisting of less differentiated fat cells that have undergone sarcomatous change [1].

The origin of lipomatous lesion of uterus has been subject of much speculation. In the past, they were reported as hamartomas or more appropriately, choristomas [3]. Now, many theories have been



Figure 1: Gross specimen showing well circumscribed mass, yellow in colour in the anterior wall of the uterus.

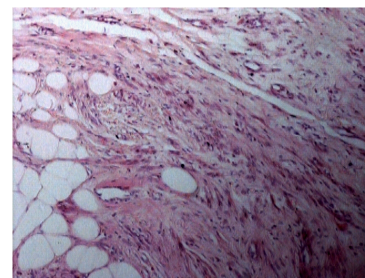


Figure 2: Photomicrograph showing adipose tissue along with muscle bundles. (Hematoxylin and Eosin 100x).

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proposed, including misplaced embryonic fat cells, direct metaplasia of smooth muscle or connective tissue into fat cells and proliferation of accompanying perivascular fat cell into blood vessel, inclusion of fat cells into the uterine wall during surgery, or fatty infiltration or degeneration of connective tissue [6]. Uterine lipoleiomyoma occur most frequently in postmenopausal women in the age group of 50-70 years. It is usually well circumscribed within thin connective tissue capsule and mostly located in posterior wall of uterine corpus [7]. These may be single or multiple, usually measuring 5-10 cm but can range from few mm to 32 cm in size [1]. Most of the patients are asymptomatic but some experience symptoms similar to that of uterine leiomyomas of comparable size, such as pelvic discomfort, heaviness, pressure and vaginal bleeding [6]. Radio imaging techniques like MRI and CT can play an important role in determining the intrauterine location and fatty nature of lipoleiomyomas but most of these are incidental findings postoperatively on histopathology. MRI including fat suppression sequence is a useful technique to diagnose uterine lipoleiomyomas with its high sensitivity and specificity to fat and with its multi sectional ability to detect the precise location. Although, it is not often possible to differentiate uterine lipoleiomyoma with other lipomatous tumours [1].

The differential diagnosis of fat containing mass in female pelvis is quite limited. The vast majority of these lesions are benign cystic ovarian teratoma. Others include uterine fatty tumours, ovarian lipomas or possibly ovarian lipoleiomyoma. Differentiation of these neoplasms on CT or Ultrasonography is difficult at times but in certain circumstances the distinction might be possible. If lipomatous mass is of uterine origin, it is likely to be a uterine fatty tumour, the more solid non lipomatous components present in the mass, and likely the mass is lipoleiomyoma as fibromyolipoma. Most fatty masses that are clearly separate from uterus are benign cystic ovarian teratoma [8].

Malignant fatty tumors primary to uterus are exceedingly rare. The sporadic association of endometrial carcinoma with lipomatous tumour of uterus is interesting but statistically unproven. They

are often misdiagnosed as sarcoma due to old age of patients, rapid progression of abdominal swelling, abdominal pain and well circumscribed hyper echoic texture on ultrasound [9]. We could also differentiate lipoleiomyoma from leiomyoma with fatty degeneration, in lipoleiomyoma adipose tissue is evenly distributed throughout the lesion, suggesting that fat is integral part of lesion. Furthermore lipomatous degeneration rarely occurs in smooth muscle tumour of soft tissue. In addition lipoleiomyoma can be distinguished from leiomyosarcoma by bland nuclei and paucity of mitosis in smooth muscle component [5]. Finally it is said that lipoleiomyoma of uterine corpus are extraordinarily rare entities with clinical manifestation similar to leiomyomas, having intuitive radiological characteristics, demonstrable histology and excellent prognosis.

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