

Uterine Lipoleiomyoma -A Rare case report and literature review

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Abstract: Lipoleiomyoma is a rare 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. 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. Most cases of lipoleiomyomas cannot be distinguished clinically from leiomyoma and to a large extent diagnosis can be made on the typical gross appearance & histopathological examination of the tumour. Incidence of this neoplasm is estimated to be 0.03-0.2%. The majority of patients do not report any symptoms. Almost all of the cases of lipoleiomyoma have been reported in postmenopausal women. We report a case of uterine lipoleiomyoma in a 73 year old woman who presented with abdominal pain and postmenopausal spotting. A preoperative diagnosis of leiomyoma was made based on ultrasonography findings.

Key words: Uterine lipoleiomyoma, leiomyoma, Postmenopausal

Introduction: Fatty tumours primary to the uterus are very uncommon and almost invariably benign [1]. The incidence of uterine fatty tumors varies from 0.03-0.2% [2]. 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 [3], and certain authors consider them to be hamartomatous lesions [4]. It consists of smooth muscles and mature adipose tissue [5]. Fatty metamorphosis of smooth muscle cells of leiomyomas is the most likely cause for development of lipoleiomyomas [6]. They are typically found in postmenopausal women and are associated with ordinary leiomyomas. They present with signs and symptoms as a palpable mass, hypermenorrhoea and pelvic pain; similar to that of ordinary leiomyoma [7]. Pelvic tumours that contain fat are common findings in women. Although these lipomatous tumours are rare, their differentiation can be clinically significant as asymptomatic lipomatous uterine tumours may require no therapy [8].

Case report: A 73 years old postmenopausal woman presented with complaints of postmenopausal spotting and abdominal lump gradually increasing in size for 3 months. She attained menopause at 54 years. Pelvic examination revealed uterus of 18-20 weeks. Hematological and biochemical parameters were within normal limits. USG revealed a well delineated hyperechoic mass at fundus of uterus, 5cms in diameter. Endometrial biopsy showed scanty material with proliferative phase & no evidence of malignancy. A hysterectomy was planned with a provisional diagnosis of uterine leiomyoma. Laprotomy revealed enlarged uterus with a globular fundal mass. The mass was soft to firm in consistency and the surface was smooth and glistening yellow white with no adhesions. Both ovaries were atrophic. The hysterectomy specimen measured 9x6x5cm with globular enlargement of the

fundus. Cut surface showed a well-circumscribed homogenous glistening yellow intramural mass measuring 5x5x4cm. with displacement of the endometrial cavity towards the lower pole.[Figure 1]



Figure 1: Gross specimen of uterus showing yellow white glistening intramural mass pushing the endometrial cavity towards lower pole.

Histopathological examination showed thin atrophic endometrium. The mass was composed of mature adipose tissue and smooth muscles intersected by fibrous septae,[figure 2 and figure 3]

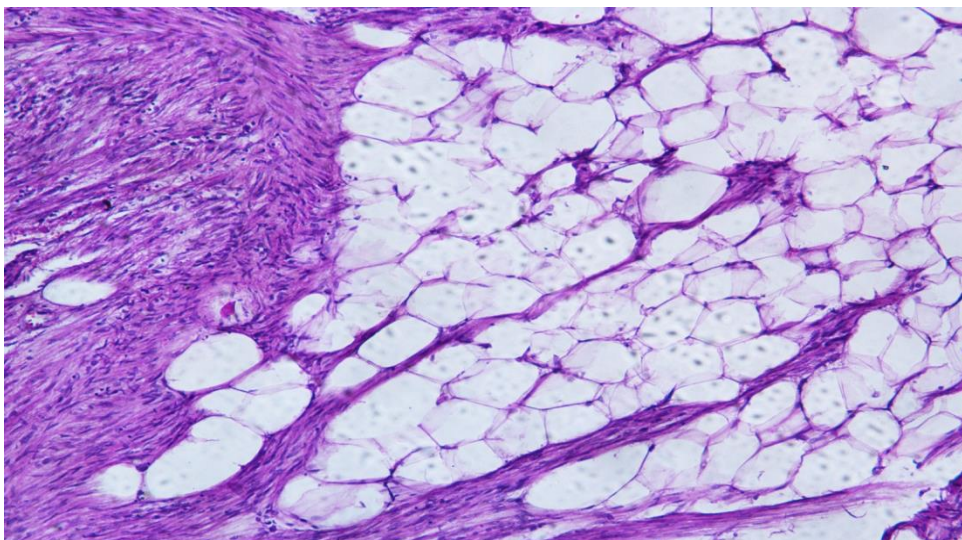


Figure 2: Microscopic picture of uterine mass showing lobules of mature adipose tissue intermingled with the fascicles of smooth muscle cells (H& E x 10x).

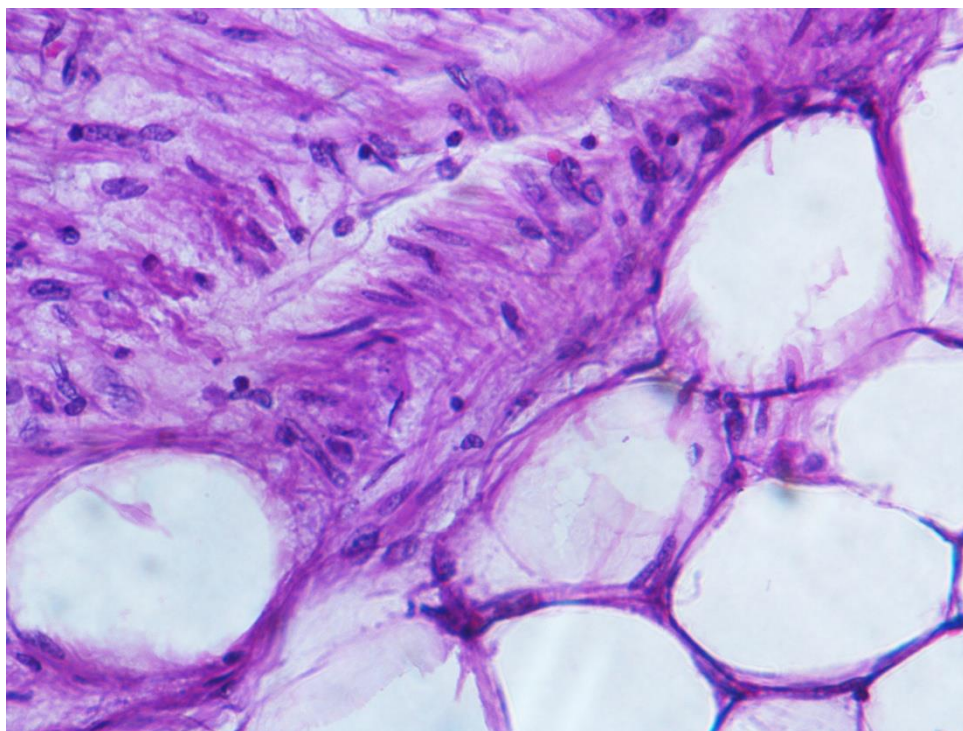


Figure 3:Microscopic picture of uterine mass showing lobules of mature adipose tissue intermingled with the fascicles of smooth muscle cells (H& E x 40x).

Discussion: Lipomatous uterine tumours are rare. Pathologically, they are characterized into three groups. The first group comprises of pure lipomas which are composed of only mature fat cells and is well encapsulated. The second group consists of lipoleiomyomas, angiomyolipomas and fibromyolipomas[9],[10]. These are mixed tumours containing various mesodermal components such as adipose tissue, smooth muscle cells, fibrous component and connective tissues. The third and the rarest group is liposarcoma. Lipoleiomyomas are the most common entity in the above mentioned categories[11]. The uterine lipoleiomyomas are rare fatty tumours with reported incidence of 0.03-0.2%[12]. Lipoleiomyomas have predominant fatty components admixed with smooth muscles & fibrous tissues. Lipoleiomyomas can occur anywhere in the uterus, in the cervix, the serosal layer or the broad ligament. The most common location is the corpus of the uterus intramurally. In our case tumour present in fundus and corpus of uterus. The mass may be endophytic or exophytic, with respect to the uterus, endophytic in our case. On USG, lipoleiomyomas appear as hyperechoic mass partially encased by a hypoechoic rim. The rim is thought to represent a layer of myometrium surrounding the fatty component[13]. The fatty component can be confirmed on MRI using fat-suppression techniques[6]. As fatty tissue is not a part of normal myometrium, the exact pathogenesis is obscure. Many theories such as fatty metamorphosis, lipomatous degeneration, lipomatous metaplasia of smooth muscle cells, metaplasia in pericapillary pleuri-potential mesenchymal cells, and perivascular extension of peritoneal or retroperitoneal fat along the blood vessels have been suggested[13],[14]. The patients with uterine lipoleiomyomas are usually perimenopausal and post menopausal women with an incidental diagnosis. The signs and symptoms of lipoleiomyomas are similar to the leiomyomas of similar size. Large lesions may present with lower abdominal pain or lump. Uterine lipoleiomyomas presenting with post menopausal bleed is rare[15]. On gross examination, tumours are rounded or oval, well encapsulated, yellow and soft. Microscopically, tumour shows lobules of mature adipose tissue and smooth muscles intersected by fibrous septae. Differential diagnosis of the lipomatous mass in the pelvis includes: benign cystic ovarian teratoma, malignant degeneration of cystic teratoma, nonteratomatous lipomatous ovarian tumor, benign pelvic lipoma. Imaging plays an important role in preoperative identification of the fatty nature and exact intrauterine location of a leiomyoma. Liposarcoma and lipoblastic lymphadenopathy are the associations of lipomatous uterine tumors and endometrial carcinoma with lipoleiomyosarcoma arising in uterine lipoleiomyoma have been reported[16].

Conclusion: When palpable mass is detected during a manual pelvic examination in postmenopausal patients, a gynecologist should consider the possibility of lipoleiomyoma. USG images, CT and MRI may be helpful in preoperative diagnosis of these lesions. The final diagnosis is established on the basis of a histopathological examination of the tissue specimen.

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