ISSN : 2949 - 9100

International Journal of Health and Dentistry Care (IJHDC)

IJHDC : Health and Dental Publication
Available Online at: www.ijhdc.com
Volume – 4, Issue – 2, March – April – 2025, Page No. : 01 – 05

An Evolution with Incidental Encounter of Uterine Lipoleiomyoma in Postmenopausal Female

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Citation This Article: Annanta GM Donald, Michele D L Nisus, "An Evolution with Incidental Encounter of Uterine Lipoleiomyoma in Postmenopausal Female", IJHDC – March – April – 2025, Volume. – 4, Issue – 2, P. No. 01 – 05.

Type of Publication: Case Report

Conflicts of Interest: Nil

Abstract

Uterine leiomyomas are the most common benign neoplasm of the reproductive system in women. Uterine lipoleiomyomas are a rare variant of leiomyoma, with an overall reported incidence of 0.03 to 0.2%. Lipoleiomyomas are made up of a varying proportion of mature adipocytes interspersed in uterine smooth muscles. Imaging plays an important role in determining the intrauterine location and fatty nature of lipoleiomyomas but most of these are detected incidentally in histopathological findings postoperatively. Here were port a rare case of 55-year-old postmenopausal women with uterine lipoleiomyoma.

Keywords: Histopathological, Postmenopausal, Vaginal Bleeding. Lipoleiomyomas

Introduction

Uterine leiomyoma is a benign neoplasm attributed to the proliferation of uterine smooth muscle cells due to the continuous stimulation of circulating estrogen. Lipoleiomyoma is a rare, benign variant of uterine leiomyoma. age. The first report as a"myolipoma of soft tissue" was thought to have been described in 1991 by Meis and Enzinger. These tumors generally occur in obese perimenopausal or postmenopausal women. The clinical presentation of lipoleiomyoma involves variable signs and symptoms, yet, the vast majority are asymptomatic. Sometimes patients may present with a palpable pelvic mass, abdominal pain, abnormal uterine bleeding, and urinary frequency. These tumors are seen in the uterus as intramural growths but rarely may be seen arising in the cervix and the broad ligament. It is histologically characterized by mature adipose tissue admixed with smooth muscle.

Case Report

A 55-year-old multiparous postmenopausal female, came with chief complaints of bleeding per vaginum for 2 months. Postmenopausal bleeding was irregular and was also associated with crampy abdominal pain. She attained menopause at the age of 51. On pelvic examination, a 15-week size mass which is firm mobile

non tender was identified. Ultrasonography of the mass measured 10.5×9.5×6.5 cm. Both ovaries were normal sonographically.

All the standard blood and serological parameters were within normal range. The patient underwent a total laparoscopic hysterectomy with bilateral salpingo-oophorectomy uneventfully. The postoperative period was also uneventful.

On gross examination of the specimen, the uterus with cervix measured 15×11×6.5cm. On the cut section, a large intramural mass measuring 10.5×6×5cm obliterating the endometrial cavity was seen. On serial sectioning of the mass, multiple well-circumscribed homogenous grey-white areas with whorled appearances were seen. The cervix and bilateral fallopian tubes appeared normal.

On histopathological examination of the H&E stained section of the intramural mass, showed intersecting fascicles of monotonous spindle cells with indistinct borders, eosinophilic cytoplasm, cigar-shaped nuclei (with tapered ends), and small nucleoli admixed with many mature adipocytes. No cytologic atypia, mitoses, or tumor cell necrosis was seen. The adipose component was devoid of lipoblasts. Histological examination of the cervix shows chronic cervicitis with squamous metaplasia and nabothian cysts. Bilateral fallopian tubes were histologically unremarkable.

Discussion

Uterine lipoleiomyomas is a very rare variant of uterine leiomyomas. Various literature reported its incidence to be 0.03% to 0.2%. It is a benign, well-defined mass and has a very high content of fatty or adipose tissue admixed with smooth muscles and fibrous tissues. Uterine lipoleiomyomas are most commonly seen in postmenopausal women, between 50 to70 years of age. Lipoleiomyomas may be single or multiple, most commonly measuring around 5 to 10 cm, but ranging from a few millimeters to about 32 cm. Most patients are asymptomatic but also present with some symptoms similar to those of uterine leiomyomas, such as pelvic discomfort, heaviness, and vaginal bleeding. Lipoleiomyomas can arise from any site in the uterus, cervix, serosal layer, or broad ligament. Most commonly, it is located in the body of the uterus, intramurally.

The differential diagnosis of a lipomatous mass in the pelvic cavity could include benign cystic teratoma, malignant degeneration of a cystic teratoma, non-teratomatous lipomatousovarian tumor, benign pelvic lipoma, fibromyolipoma, lipoblastic lymphadenopathy, and liposarcomas. Imaging techniques including CT/magnetic resonance imaging (MRI) can help in determining the location and fatty nature of lipoleiomyomas, but mostly this is an incidental postoperative finding on histopathology. Distinguishing features of lipoleiomyoma on computed tomography (CT) scans include a well-circumscribed, heterogenous mass with low attenuation fatty components mixed with non-fat tissue density. The histopathological picture would be of mature adipocytes embedded in smooth muscle cells. Imaging techniques assisted by histopathology will help to clinch the diagnosis.

The etiopathogenesis of lipoleiomyoma is unknown; however, several hypotheses have been proposed. The adipose tissue element of lipoleiomyoma is thought to be from the degeneration of leiomyoma. Recently, a complex histogenesis of lipoleiomyoma arising from lipomatous metaplasia of the smooth muscle cells of leiomyoma, or the direct transformation of smooth

muscle cells into adipocytes that may originate from the transformation of atotipotent mesenchymal cell(5).

Some studies propose that this lipomatous change is not a degenerative change but an overall different histological subtype (6).

Perivascular extension of peritoneal or retroperitoneal fat along the blood vessels has also been suggested (7). Lesions of hyperestrogenic state coexist with the lipoleiomyoma like other leiomyomas in some patients, such as endometriosis, adenomyosis, endometrial hyperplasia, polyps, and related malignancies, which may contribute to the development of lipoleiomyoma. Lipoleiomyoma may also be associated with some metabolic disorders such as hyperlipidemia, hypothyroidism, and diabetes mellitus.

Lipoleiomyoma is a condition with a favorable prognosis, and can rarely progress to leiomyosarcoma. Generally, small asymptomatic lipoleiomyomas do not require surgery and are often managed conservatively. Surgery is useful and indicated in symptomatic larger masses.

Conclusion

Uterine lipoleiomyoma is a rare benign variant of leiomyoma. Imaging studies and distinct histopathological features aid in its diagnosis. It has an excellent prognosis. Although the management is similar to leiomyoma, owing to the rare occurrence and various theories of its etiopathogenesis, it invokes much interest in further studies.

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Legend Figures

Figure 1:

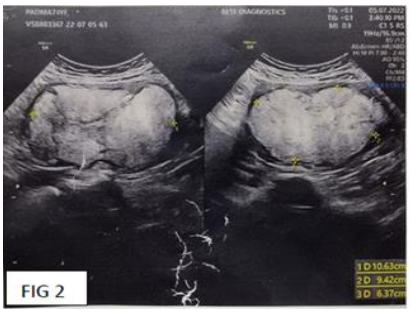

Figure 2:

Figure 1, 2: Abdominal ultrasonography showing large heterogenous hyperechogenic lesion

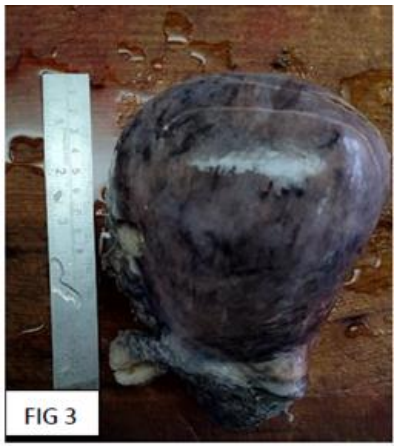

Figure 3:

Figure 4:

Figure 3, 4: Gross specimen of enlarged uterus with cervix (3). On cut section a large intramural fibroid with whorled appearance and few grey tan areas.

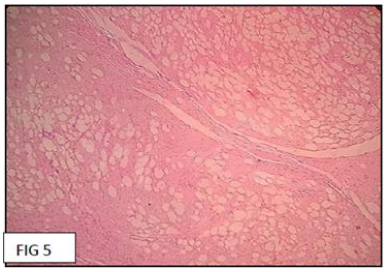

Figure 5: Histopathology section showing mature adipocytes admixed with smooth muscle cells. (H&E 100x)

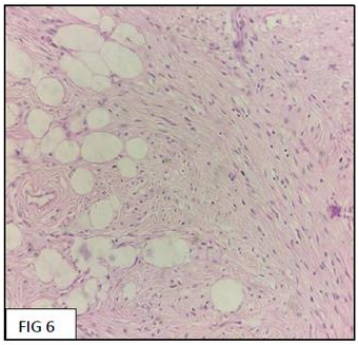

Figure 6:

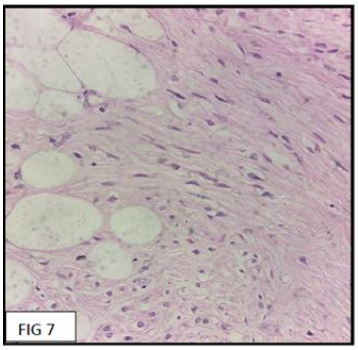

Figure 7:

Figure 6, 7: High power view showing mature adipocytes with flat nuclei and smooth muscle cells with oval nuclei. (H&E 200x, 400x)