ORIGINAL RESEARCH PAPER

Pathology

UTERINE SUBMUCOSAL LIPOLEIOMYOMA DETECTED DUE TO UTERINE PROLAPSE

KEY WORDS:

Dr Mrunal Kesari	MD, DNB Pathology Consultant Pathologist, Junior DNB Faculty Department of Pathology and Laboratory Medicine. First Floor Annexe Building, Jagjivanram Hospital, Western Railway, Mumbai 400008
Dr Yoganand Patil	MD Pathology Head of Pathology Dept., Senior DNB Faculty.Department of Pathology and Laboratory Medicine. First Floor Annexe Building, Jagjivanram Hospital, Western Railway, Mumbai 400008
Dr Indranil Bhattacharya	MD Pathology Consultant pathologist Department of Pathology and Laboratory Medicine. First Floor Annexe Building, Jagjivanram Hospital, Western Railway, Mumbai 400008
Dr.Ashok kumar	MS Obstetrics and Gynaecology Consultant Obstretrician and Gynaecologist Department of Obstetrics and Gynaecology, third Floor Jagjivanram Hospital, Western Railway, Mumbai 400008
Dr Shweta Agrawal*	MD Pathology Senior Resident Department of Pathology and Laboratory Medicine. First Floor Annexe Building, Jagjivanram Hospital, Western Railway, Mumbai 400008*Corresponding Author

ABSTRACT

Lipomatous uterine tumors are uncommon benign neoplasms, with incidence ranging from 0.03% to 0.2%.A 70 yr female had grade 2 prolapse. She underwent vaginal hysterectomy. Sonography suggested hyperechoic mass in uterine fundus. Incidentally detected yellowish mass showed features of lipoleiomyoma. IHC showed Desmin, SMA positivity and S100 negative in spindle cells of tumor, thereby confirming the diagnosis Differential diagnosis of fatty lesions of female pelvis includes spectrum from benign to malignant lesions. Correct diagnosis may save patients from unnecessary major surgery. The rarity of lesion and its submucosal location at this site makes us write this case.

Introduction:

The incidence of uterine fatty tumors varies from 0.03-0.2%.1 Uterine lipoleiomyoma is reported in perimenopausal women and post menopausal women.[2]

Case report:

A 70 year old lady had grade 2 uterine prolapse. Vaginal hysterectomy was done. On Ultrasonography a hyperechoic area in anterior wall of uterus 3.4 x 2.5 cm Differential diagnosis of Endometrial Polyp and Submucosal fibroid was given.

The Histopathology lab received a hysterectomy specimen measuring 8x 4.5 x 2.5cm. On cutting open the uterus yellowish mass measuring 3 x 2.5 cm was seen in the uterine corpus (Fig 1). Uterine cavity was obliterated completely. Cervix measured 3cm in length.

Microscopic examination of H&E slides showed an encapsulated tumor composed of lobules of mature adipose tissue separated by fibrovascular septae. Interspersed fascicles of smooth muscle fibres are seen. There was no evidence of malignancy in sections studied (Fig 2). Histopathological diagnosis was Benign Lipomatous tumor, Lipoleiomyoma.

Immunohistochemistry was done for confirmation. Desmin positivity was seen in spindle cells. SMA was positive in spindle cells, and adipocytes were positive for S-100 (Fig 3a,3b,3c).

Discussion:

The presence of fatty tissue in the myometrium is anomalous. It can be interpreted either as a lipomatous degeneration or as a metaplasia of smooth muscle cells or as a neoplasm.[3]

The incidence of uterine fatty tumors varies from 0.03-0.2%.[1]They are classified into two types: pure or mixed lipomas]. Pure lipoma of the uterus is extremely rare.[4,5] The majority of cases of lipoleiomyoma are found in postmenopausal women between 50-70 years of age.[1]The latter consist of lipoleiomyoma, angiomyolipoma, fibrolipoma[5] Mixed lipoma contains variable amounts of fat, fibrous tissue and smooth muscle.[4,5]

Differential histological diagnosis does not present great difficulties for the recognition of a lesion. Only in those rare cases in which they are located submucosally, and the only material available is a small specimen obtained by hysteroscopy. In these circumstances, the most frequent entities to rule out are lipoleiomyomas, clear cell leiomyomas, myxoid mesenchymal tumors and liposarcomas as an integral part of mixed Mullerian tumours. In most cases immunohistochemical techniques and the absence of atypias would resolve these reasonable doubts.[6]Primary liposarcomas of the uterus are extremely rare and are most likely to arise from malignant transformation of a lipoleiomyoma.[7]

This case is unique on account of its rarity and its uncommon submucosal location obliterating the uterine cavity.The tumors are most commonly located in uterine fundus and are of intramural type .It is rarely be found in the cervix or in subserosal or submucosal area.[8,9]

Studies show that an increased estrogenic state may also be a contributing factor in Lipoleiomyoma. Alteration in the lipid metabolism with menopause may have a role in its development. Also these patients commonly suffer from metabolic disorders such as hypothyroidism, hyperlipidemia, and diabetes mellitus.[10,11] This patient had diabetes mellitus since 20 years and treated with Metformin 500mg .

Most of the patients are asymptomatic. If there are any symptom the presentation is similar to that of leiomyoma . For example, the patient may complain of a palpable mass,

urinary frequency, constipation, pelvic discomfort, uterine bleeding or hypermenorrhea. These are related to the size and location of the lesion.[12,13,14] In our case the patient was asymptomatic and the lesion was detected incidentally as part of routine histopathological examination of hysterectomy specimen done for prolapse. Till now no case of lipoleiomyoma associated with prolapsed of uterus has been reported.

Imaging techniques offer little help in accurate diagnosis as only few isolated reports diagnosed on MRI are there. [15] There are a number of differential diagnoses for a fat-containing tumor in the female pelvis. Benign cystic ovarian teratoma, malignant degeneration of a benign cystic ovarian teratoma, non-teratomatous lipomatous ovarian tumor, benign pelvic lipoma, liposarcoma, extra-adrenal myelolipoma in pelvis, lipoblastic lymphadenopathy and retroperitoneal cystic hamartoma. Among the long list of differentials, the most common one is benign cystic ovarian teratoma, which usually requires surgical excision [16.] Treatment of a lipoleiomyoma generally depends on the symptoms the patient presents with and the size of the mass. [12]

Diagnosis is accomplished after a meticulous analysis of the surgical piece, although some radiological techniques may indicate their existence prior to surgery .[6]

Asymptomatic uterine lipoleiomyoma can be managed conservatively. Hence, accurate diagnosis of lipoleiomyoma is important in the management of the patient and can prevent unnecessary surgical excision.[12]

CONCLUSION:

Diagnosis of lipomatous tumors on imaging studies should be confirmed by histopathology, as these tumors can mimic a variety of other uterine neoplasms including malignancy. Lipoleiomyoma although rare and benign should be correctly diagnosed.

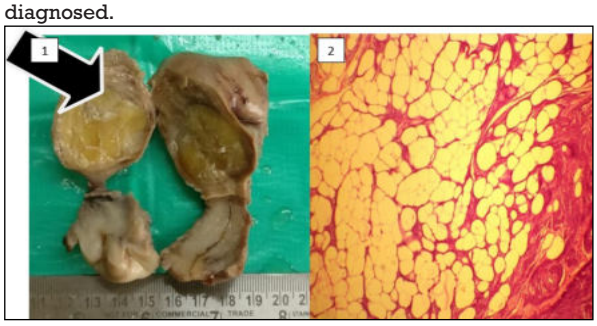

Fig 1: Gross showed yellowish mass seen in the uterine corpus and obliterating uterine cavity.

Fig 2: H&E slide low power showed an encapsulated tumor composed of lobules of mature adipose tissue

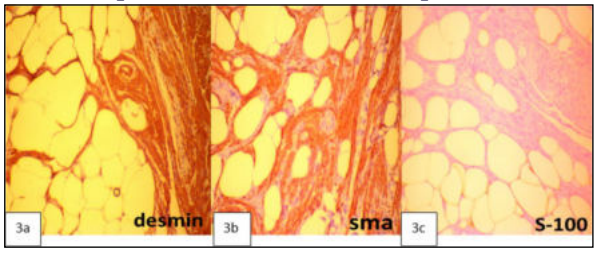

Fig 3: IHC showed Desmin and SMA positivity in spindle cells and S-100 positivity in adipocytes

References:

1. Garg A, Sudhamani S, Kiri V M, Pandit AA. Pure lipoma of uterus: A case report with review of literature. J Sci Soc 2013; 40:114-5
2. Kitajima K, Kaji Y, Imanaka K, Sugihara R, Sugimura K. MRI findings of uterine lipoleiomyoma correlated with pathologic findings. AJR Am J Roentgenol. 2007; 189:W100–W104.
3. Dellachà A1, Di Marco A, Foglia G, Fulcheri E. Lipoleiomyoma of the uterus. Pathologica. 1997 Dec;89(6):737-41.
4. Coumbaras M, Validire P, Strauss C, Herry M, Dahan H, Palau R. Uterine lipoma: MRI features with pathologic correlation. Abdom Imaging. 2005;30:239–241.
5. Erdem G, Celik O, Karakas HM, Alkan A, Hascalik S. Pure uterine lipoma. Magn Reson Imaging. 2007;25:1232–1236.
6. L.M. Houser, C. H. Carasco, and C. R. Seehan. Lipomatous tumour of the uterus: radiographic and ultrasonic appearance. The British Journal of Radiology, vol. 52, pp. 992–993, 1979.
7. McDonald A G, Cin P D, Ganguly A, Campbell S, Imai Y, Rosenberg A E, Esther Oliva. Liposarcoma arising in uterine lipoleiomyoma: a report of 3 cases and review of the literature. Am J Surg Pathol. 2011 Feb; 35(2): 221–227.
8. Chan HHL, Chau MT, Lam CHL, Cheung SCW. Uterine lipoleiomyoma: ultrasound and computed tomography findings. J HK Coll Radiol. 2003;6:30–32.
9. Loffroy R, Nezzal N, Mejean N, Sagot P, Krausé D. Lipoleiomyoma of the uterus: imaging features. Gynecol Obstet Invest. 2008;66:73–75.
10. Salman MC, Atak Z, Usubutun A, Yuce K. Lipoleiomyoma of broad ligament mimicking ovarian cancer in a postmenopausal patient:Case report and literature review. J Gynecol Oncol 2010;21:62-4
11. Sharma S, Mandal AK. Uterine lipoleiomyoma: A five year clinicopathological study. Ann Woman Child Health 2016;2:A22-6.
12. Chan HHL, Chau MT, Lam CHL, Cheung SCW. Uterine lipoleiomyoma: ultrasound and computed tomography findings. J HK Coll Radiol. 2003;6:30–32.
13. Loffroy R, Nezzal N, Mejean N, Sagot P, Krausé D. Lipoleiomyoma of the uterus: imaging features. Gynecol Obstet Invest. 2008;66:73–75
14. Senior EL, Taylor HL. Uterine leiomyolipoma - incidental finding on screening CT. Eur J Radiol Extra. 2006;59:63–65.
15. Coumbaras M, Validire P, Strauss C, Herry M, Dahan H, Palau R. Uterine Lipoma: MRI features with pathologic correlation. Abdom Imaging 2005;30:239-41.
16. Dodd GD, Budzik RF. Lipomatous uterine tumors: diagnosis by ultrasound, CT, and MR. J Comput Assist Tomogr. 1990;14:629–632