

Fatty Giant from the Pelvis: An Unusual Case of Giant Broad Ligament Lipoleiomyoma

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ABSTRACT

Primary lipid tumors of the uterus are rare and usually benign. We report a case of a giant lipoleiomyoma of broad ligament which is even rarer. Lipoleiomyoma is a rare variant of uterine leiomyoma composed of an admixture of smooth muscle cells, lobules of adipocytes and fibrous tissue. They can be associated with adenomyosis, endometriosis, endometrial hyperplasia and polyps

Key Words: Lipoleiomyoma, Broad Ligament, Uterus, Ultrasound, CT.

Article History:

Received: 05-04-2017, Revised: 28-04-2017, Accepted: 12-05-2017

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Access this article online

Website: www.ijmrp.com	Quick Response code 
DOI: 10.21276/ijmrp.2017.3.3.059	

CASE REPORT

A 46 year old female presented with abdominal distension of 2 weeks and amenorrhea for 2 months. There were no complaints of bleeding per vagina or loss of weight or appetite. She is multiparous and her last child birth was 16 years ago. Her past menstrual history was normal. There was no history of diabetes mellitus, hypertension or dyslipidemia. Per abdominal examination revealed a firm mass about 30x30cm size occupying left lumbar and iliac fossa extending to pelvis with limited mobility.

Ultrasound examination showed a large well defined mixed echogenic lesion with predominant hyperechoic areas and a few hypoechoic areas in the lower abdomen and pelvis converging to left side of uterus (Fig-1). No significant internal vascularity was demonstrated. Contrast CT sections of abdomen and pelvis showed a well-defined mixed density lesion with fat density areas and non-enhancing soft tissue density areas located in the left side of abdomen and pelvis in extra peritoneal location converging towards the left cornu of uterus. Multiple vessels from the uterus were noted to supply the lesion [Fig -2(A) and 2(B)]. Even though bilateral ovaries were not separately imaged in CT sections, considering the age of the patient, the location and fat density areas, possibility of a subserosal pedunculated lipoleiomyoma was considered.

The patient underwent total abdominal hysterectomy with bilateral salpingo-oophorectomy and removal of the mass. Uterus was bulky. A broad ligament fibroid of 30x30 cm was noted on the left side which was soft in consistency with intact capsule and the pedicle was noted arising from left lateral wall of uterus. Cut

section of the mass showed greyish white whorled areas with yellowish fatty areas. Microscopically, spindle cells arranged in whorled pattern and mature adipocytes in lobular pattern were seen with no nuclear atypia, which was suggestive of lipoleiomyoma. Post operatively the patient recovered uneventfully.

DISCUSSION

Primary lipid tumours of the uterus are rare and are usually benign. The spectrum of these tumours include pure lipomas- well encapsulated and composed of mature adipocytes, lipoleiomyomas- contains more amount of mature adipose tissue than smooth muscle cells, and fibrolipomyomas- contains more fibrous tissue than adipose tissue.¹

Lipoleiomyoma is a rare variant of uterine leiomyoma composed of an admixture of smooth muscle cells, lobules of adipocytes and fibrous tissue. They can be associated with adenomyosis, endometriosis, endometrial hyperplasia, and polyps.² The incidence has been reported to range between 0.03% and 0.2%. Various hypotheses considered for the pathogenesis include – direct metaplasia of smooth muscle cells of leiomyoma and metaplasia of pluripotent mesenchymal cells.¹ Lipoleiomyomas may be associated with metabolic disorders including diabetes mellitus and hyperlipidemia as plasma lipids can offer a source for the fat deposition in smooth muscle cells. Many lipid metabolism disorders are originated from postmenopausal estrogen deficiency and promote the abnormal intracellular storage of lipids.^{2,3}



Fig 1: Ultrasound image showing well defined mixed echogenic lesion with predominant hyper echoic areas; suggestive of fat containing lesion.

Radiological diagnosis of broad ligament lipoleiomyoma can be difficult because of their similarity to ovarian tumour. On ultrasound the fat containing areas will appear as hyperechoic.⁴ In computed tomography sections, fat density areas will be identified. Magnetic resonance imaging shows hyper intense signals in T1 and T2 sequences which will be suppressed in fat suppressed sequences.^{5,6}

CONCLUSION

The differential diagnosis of fat containing lesions of pelvis includes uterine lipoleiomyoma, ovarian or retroperitoneal mature cystic teratoma, benign lipoma, liposarcoma, angiomyolipoma and retroperitoneal liposarcoma. However the key differentiating feature is the identification of organ of origin and the feeding vessels.



Fig 2: (A & B) Contrast axial and coronal sections of CT showing well defined mixed density lesion with non enhancing areas and fat density areas converging to left cornu of uterus with vessels traversing the interface.

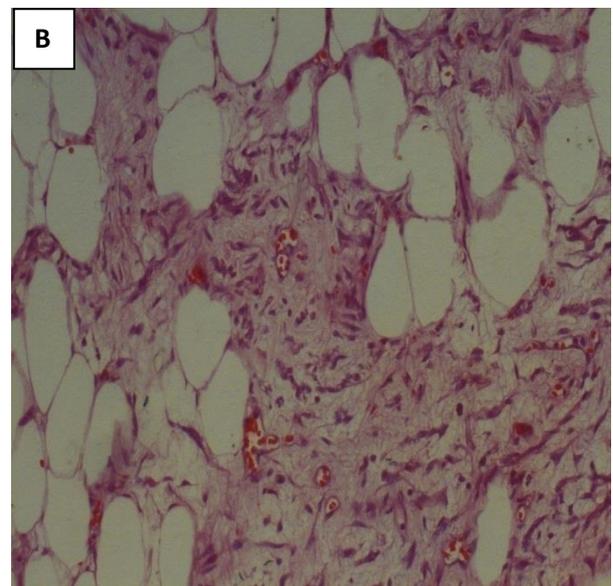


Fig 3: (A) Cut sections of the mass showing greyish white whorled areas with yellowish fatty areas. (B) High power field microscopy showing spindle cells arranged in whorled pattern and mature adipocytes in lobular pattern.

REFERENCES

1. Wahal SP, Mardi K. Lipoleiomyoma of uterus and lipoma of broad ligament—a rare entity. *J Cancer Res Ther.* 2014 Apr-Jun; 10 (2): 434-6. doi: 10.4103/0973-1482.136682. PubMed PMID: 25022417.
2. Salman, M. C., Atak, Z., Usubutun, A., &Yuce, K. Lipoleiomyoma of broad ligament mimicking ovarian cancer in a postmenopausal patient: case report and literature review. *Journal of Gynecologic Oncology* 2010, 21(1), 62–64.
3. Erbil Karaman, Numan Çim, Gülay Bulut, et al., A Case of Giant Uterine Lipoleiomyoma Simulating Malignancy, *Case Reports in Obstetrics and Gynecology*, vol. 2015, Article ID 926961, 4 pages, 2015. doi:10.1155/2015/926961
4. Tsushima Y, Kita T, Yamamoto K. Uterine lipoleiomyoma: MRI, CT and ultrasonographic findings. *Br J Radiol.* 1997 Oct; 70 (838): 1068-70. PubMed PMID: 9404215.
5. *Textbook of Radiology and Imaging* 7th edition – David Sutton.
6. *Diagnostic Ultrasound – 4th edition – Carol M Rumack, Stephine R Wilson, J. William Charboneau, Deborah Levine.*

Source of Support: Nil.

Conflict of Interest: None Declared.

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Cite this article as: Juvaina P, V R Rajendran, Saanida M P, Shilpa Chandran, Sherinas Rehimani, Rezia U P, Ipsit I Menon. Fatty Giant from the Pelvis: An Unusual Case of Giant Broad Ligament Lipoleiomyoma. *Int J Med Res Prof.* 2017; 3(3):294-96. DOI:10.21276/ijmrp.2017.3.3.059