



LIPOLEIOMYOMA -AN EGG YOLK IN THE BROAD LIGAMENT -A CASE REPORT

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ABSTRACT

Lipoleiomyoma is a rare variant of leiomyoma. Clinically the symptoms are indistinguishable from an ordinary leiomyoma. It is diagnosed pre-operatively as leiomyoma or mature ovarian teratoma. Majority of them are post operative chance finding. Solid tumors of broad ligament are also rare. Most of them are lateral extensions from the uterine tumors. They are asymptomatic in majority of cases and are incidental post-operative finding. Here we report a case of lipoleiomyoma because of its rarity and its uncommon site of occurrence.

KEYWORDS : Lipoleiomyoma, broad ligament

INTRODUCTION

Lipoleiomyoma is a rare variant of leiomyoma, with an incidence ranging from 0.03% to 0.2%. First described by Lopstein in 1916, it is histologically characterized by the presence of smooth muscle fibers interspersed with mature adipocytes¹. This tumor is thought to result from metaplastic transformation within a conventional leiomyoma¹. Lipoleiomyomas typically occur in asymptomatic, obese, postmenopausal women. While the uterine corpus is the most common site, rare cases have been reported in the cervix, ovary, broad ligament, and retroperitoneum¹. We present a case of lipoleiomyoma located in the broad ligament—an uncommon site—highlighting its rarity and clinical significance.

CASE PRESENTATION

A 58year old, postmenopausal female, para(1+1) presented with complaints of abdominal distention. On examination: P/A: showed a vague mass in right iliac fossa. USG abdomen showed a heterogenous predominantly hyperechoic lesion approx. 11x7cm in right iliac fossa. Left ovary measuring 9.7x6cm with a cyst measuring 6.4x4cm. MRI done showed a fairly defined abdominopelvic lesion of 18.8x18.1x9cm. Hence, She underwent staging laparotomy. Intra operative findings were an yellowish soft tumor arising from pre-vesical space, adherent to bladder fat and anterior surface of uterus.

MACROSCOPY:

Received specimen as 2 pieces

1st piece-Single nodular fibrofatty soft tissue mass msg 15x13x9cm. Surface shows stretched over fallopian tube measuring 6cms in length. On cutting through identified fairly circumscribed lesion measuring 14x11x9cm. Cut surface is yellowish, nodular with focal whitish areas

2nd piece-Total abdominal hysterectomy with bilateral salpingo-oophorectomy



Figure 03: Cut surface is yellowish, nodular with focal whitish areas

MICROSCOPY

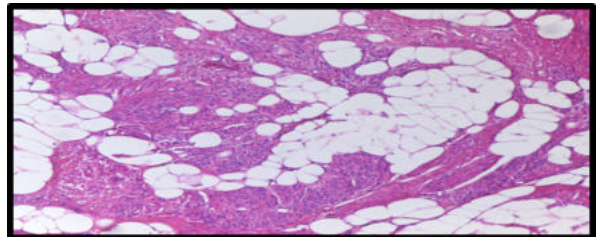


Figure 04: Sections show a circumscribed neoplasm composed of sheets of spindle shaped cells arranged in interlacing fascicles & bundles, mature adipocytes and collagen (H and E, ×10)

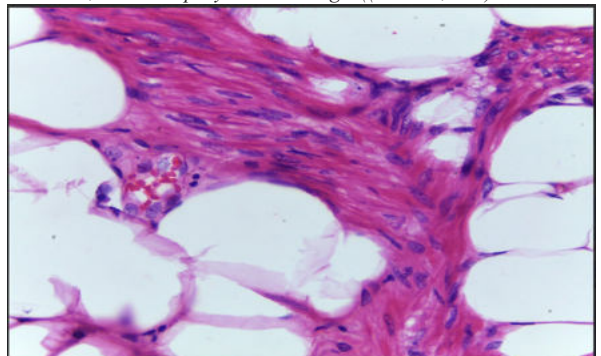


Figure 05: Smooth muscle cells with elongated nuclei and mature adipocytes (H and E, ×40)

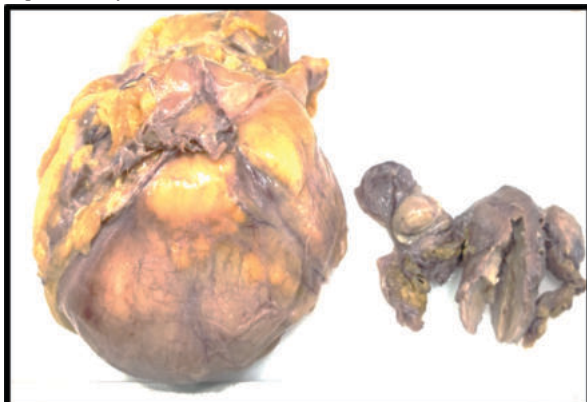


Figure 01: 1st piece-Single nodular fibrofatty soft tissue mass msg 15x13x9cm.

Figure 02: 2nd piece-Total abdominal hysterectomy with bilateral salpingo-oophorectomy

DISCUSSION

Lipoleiomyomas occurring in the broad ligament are extremely rare, with only seven cases documented to date². These tumours are considered lipomatous variants of conventional leiomyomas and are typically discovered incidentally, most often in postmenopausal women². While many patients remain asymptomatic, some may present with symptoms similar to those of typical leiomyomas, including vaginal bleeding, abdominal discomfort, pelvic or lower back pain, frequent urination, and constipation². The exact pathogenesis of lipoleiomyoma remains debated. One theory suggests they arise during the differentiation of leiomyomas, involving lipomatous transformation of an existing tumor³. Diagnosing broad ligament lipoleiomyomas preoperatively can be challenging, as they may be radiologically mistaken for ovarian carcinomas. Malignant transformation of lipoleiomyomas is extremely rare³.

To classify a neoplasm as a lipoleiomyoma, the presence of an admixture of mature adipocytes and smooth muscle cells must be observed under the microscope⁴. The distribution of adipocytes can vary, being either evenly spread throughout the tumour or concentrated in focal areas⁴. The proportion of adipocytes in lipoleiomyomas can differ significantly, and no specific threshold has been established for their quantity to confirm the diagnosis⁴. These tumours may contain small clusters of adipocytes that resemble typical leiomyomas on gross examination, or they may have a higher adipocyte content, leading to a yellow and lobulated appearance on the cut surface⁵. In the case presented, the tumour exhibited a yellow cut surface and a high concentration of adipocytes under the microscope^{5,6}.

While lipoleiomyomas are most commonly located within the uterine corpus, they can occasionally arise in other pelvic sites⁷. Extrauterine occurrences, particularly in the broad ligament, are exceedingly rare⁷.

In our case, the patient presented with abdominal distention and physical examination revealed a vague mass in right iliac fossa. Subsequent imaging demonstrated a heterogenous predominantly hyperechoic lesion approx. 11x7cm in RIF. Left ovary msg 9.7x 6cm with a cyst msg. 6.4x4cm. MRI done showed a fairly defined abdominopelvic lesion of 18.8x18.1x9cm. Hence, she underwent staging laparotomy. The ultrasonographic and CT findings were atypical for a conventional leiomyoma. Intraoperatively, the mass appeared distinct from typical uterine fibroids—it was soft in consistency, extrauterine in location, and lacked the characteristic firmness of leiomyomas. Gross examination revealed a yellow cut surface, and histopathological analysis confirmed a high adipocyte content, consistent with a lipoleiomyoma. Given the concern for ovarian malignancy, particularly in a postmenopausal woman with a solid adnexal mass, the patient underwent exploratory laparotomy. Although the absence of ascites and normal tumour markers may lower the suspicion for ovarian cancer, the solid and heterogeneous nature of the mass warranted surgical evaluation. In such scenarios, intraoperative frozen section analysis is valuable for real-time diagnosis and surgical decision-making.

Long-term follow-up of patients with uterine lipoleiomyoma has shown that these tumours are benign, with no reported cases of recurrence or disease-related mortality when lipoleiomyoma is the only pelvic pathology present.

CONCLUSION

In conclusion, broad ligament lipoleiomyomas may necessitate surgical intervention not only for symptom relief but also to exclude the possibility of ovarian malignancy—particularly in postmenopausal women, where the solid nature of the mass raises clinical concern. Comprehensive histopathological evaluation of the excised tissue is crucial to rule out any coexisting gynecologic malignancy. In the absence of malignant features, patients can be safely managed with routine annual gynecologic follow-up, as lipoleiomyomas are benign lesions with no documented risk of recurrence.

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