Case Report

Giant lipoleiomyoma of uterus mimicking ovarian dermoid cyst: a rare case report

Akanksha Jain*[1], Navin K. Sinha[1], Binit Kumar Khandelia[2]

[1]Department of Pathology, Shri Balaji Action Medical Institute, New Delhi, India
[2]Department of Pathology, Deen Dayal Upadhyay Hospital, New Delhi, India

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Abstract

Lipomatous tumors of uterine origin are unusual benign neoplasms. The histological spectrum includes lipoleiomyoma, fibrolipomyoma,angiomyolipoma, pure lipomas and leiomyoliposarcoma depending open various compositions of mesodermal tissue. The tumor consists of long intersecting bundles of bland, smooth muscle cells admixed with nests of mature fat cells and fibrous tissue.They are typically found in postmenopausal women and are associated with ordinary leiomyomas. However, giant lipoleiomyomas more than 20 cm are rare and cause diagnostic dilemma on imaging studies as they need to be differentiated with ovarian dermoid cyst. We report this unusual case of uterine lipoleiomyoma because of its rarity and giant size.

***Corresponding author:**
Dr. Akanksha Jain, R-Z, L/11 First Floor Mahaveer Enclave 1, New Delhi 110045, INDIA
Email: doctorakanksha@gmail.com; Phone: +91-9873075148

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Introduction

Lipoleiomyomas are rare benign neoplasms of uterus with reported incidence of 0.03 to 0.2%.[1,2] These tumors are considered to be a variant of uterine myomas, composed of variable proportion of mature lipocytes and smooth muscle cells.[3,4,5] The signs and symptoms are similar to those caused by leiomyomas of the same size, such as a palpable mass, hypermenorrhea, and pelvic pain. A lipomatous pelvic mass of uterine origin may be endophytic or exophytic. When the mass is exophytic, the diagnosis is more difficult, because radiologically its appearance simulates the more common ovarian tumors. We report a case of giant lipoleiomyoma that arose in the uterus and was preoperatively misdiagnosed as large dermoid cyst ovary.

Case Report

A 66-year-old postmenopausal diabetic woman presented with lower abdominal pain and distension since 10 days. Clinical examination revealed large palpable mass in lower abdomen. Ultrasonography was done which suggested a large bulky abdomino-pelvic mass. CECT whole abdomen was reported as large left ovarian dermoid cyst causing bilateral mild hydronephrosis displacing surrounding bowel loops.

All the standard serological and hematological investigations and metastatic workup was done and the parameters were within normal range. The patient underwent total abdominal hysterectomy with bilateral salpingo-oophorectomy. Per-operative examination revealed large uterine mass approximately 25 cm in diameter with unremarkable cervix and bilateral adnexa. There was absence of free fluid or abdomino-pelvic deposits.

Figure 1: Gross examination of uterine lipoleiomyoma showing yellowish cut surface with focal grey white area showing whorling.

On gross examination of the specimen, well circumscribed yellow-white, soft to firm, solid tumor measuring 23×19×17 cm, distorting the endometrial cavity. Few grey white whorled areas were also noted [Figure1]. Serosal surfaces of the uterus along with bilateral adnexae appeared grossly unremarkable. Histological examination of tumor showed a well circumscribed tumor composed of bland, spindle-shaped smooth muscle cells arranged as fascicles admixed with interspersed mature adipose tissue. The nuclei of the smooth muscles were elongated without nuclear atypia and had finely dispersed chromatin. Extensive sampling showed no lipoblasts or any evidence of atypia, coagulative tumor necrosis, increased cellularity or atypical mitosis [Figures 2]. Based on the above findings, a diagnosis of lipoleiomyoma was made. Both the adnexae were unremarkable histologically.

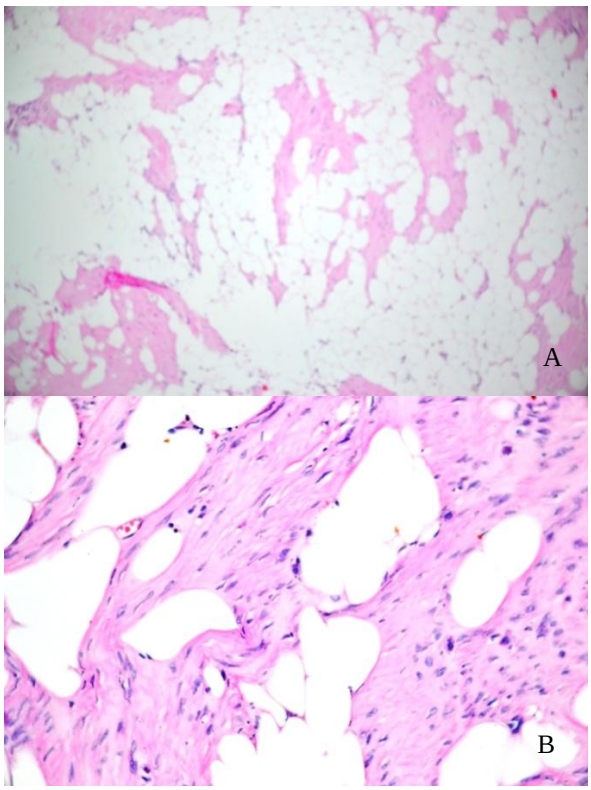

Figure 2 A&B: Microscopic examination showing proliferation of bland, spindle-shaped smooth muscle cells without nuclear atypia in a whorled pattern with admixed mature adipocytes. (H&E, 10x, 100x)

Discussion

Uterine lipoleiomyoma is an unusual benign tumor and was first described in 1991 by Meis and Enzinger. Malignant degeneration is extremely rare and so far only one case of leiomyoliposarcoma has been reported.[6] Lipoleiomyomas occurs predominantly among postmenopausal women aged between 50 and 80 years, with an incidence that ranges from 0.03% to 0.20% of all leiomyomas. This tumor is a variation of leiomyoma and consists of smooth muscle cells, mature adipose tissue and fibrous tissue with well circumscribed margins. The histogenesis of lipomatous tumors of the uterus is controversial and many theo-

ries are proposed: (1) adipose metaplasia of smooth muscle or connective tissue into fat cells, (2) lipoblastic differentiation from misplaced embryonic fat cells, (3) proliferation of perivascular fat cells accompanying the blood vessels into the uterus.[3,4,5,7] Lipoleiomyoma is usually uterine and arises more frequently from posterior wall of the uterine corpus, but occasionally may arise in the cervix and ovaries.[8,9] The diameter varies with an average of 5 to 10 centimeters. Macroscopically, the tumor resembles a leiomyoma, except for the yellowish discoloration, characteristic of the adipose tissue scattered throughout the tumor. The differential diagnosis of the lipomatous mass in the pelvis includes benign cystic teratoma, malignant degeneration of cystic teratoma, non-teratomatous lipomatous ovarian tumor, benign pelvic lipomas, liposarcomas and lipoblastic lymphadenopathy. In the past, correct diagnosis of uterine lipoleiomyoma was done only after surgery or autopsy. However, newer imaging techniques are helpful in their preoperative diagnosis. Nevertheless, despite such advances, diagnosis still remains challenging as ovarian tumors containing fat such as dermoid, pelvic lipoma or liposarcoma may mimic a lipomatous lesion on ultrasound . Even if a mass is found to be derived from the uterus, the presence of fatty tissue in myometrium is anomalous. This variation has been interpreted as lipomatous degeneration, metaplasia of smooth cells or rarelipomatous neoplasm. Computed tomography scanning may show more specific findings, revealing a well-circumscribed, predominantly fatty mass with areas of nonfat soft tissue density deriving from the uterus. However, in the present case because of large size of tumor even in CECT abdomen, it was difficult to differentiate this lesion from ovarian dermoid cyst. Thus, radical hysterectomy was done with an impression of ovarian tumor preoperatively.

This case is presented here as giant lipoleiomyomas are rare lesions and one should be aware of this entity to avoid diagnostic dilemma caused preoperatively by its fat component while differentiating with more common ovarian neoplasm. This also prevents undue apprehension and more radical procedures as done in our case.

Conclusion

Uterine lipoleiomyoma is an uncommon finding generally diagnosed postoperatively during histopathological examination. Malignant transformation is rare, although few case reports are described in literature. We present this case of uterine lipoleiomyoma because of its giant size, which is rare, causing clinical and radiological diagnostic dilemma preoperatively in the present case.

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Competing Interests

None declared.

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