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Pathology

Uterine Lipoleiomyoma Associated With Endometrial Carcinoma: A Rare Occasion

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Abstract | **Case Report**

Lipoleiomyoma is a rare benign uterine tumour thought to be a variant of leiomyoma. It occurs mostly in perimenopausal or postmenopausal obese women. Association of LL with endometrial carcinoma is exceedingly rare. We report a case of LL uterus with endometrial carcinoma in a 73 years old woman presenting with postmenopausal bleeding.

Keywords: Lipoleiomyoma (LL), estrogen, leiomyoma.

INTRODUCTION

Lipomatous uterine tumours are unusual benign neoplasms. Lipoleiomyoma is a rare variant of leiomyoma composed of intimate admixture of mature smooth muscle cells and adipocytes [1]. Histological spectrum of these tumours include pure lipoma, lipoleiomyoma and fibrolipomyomas [2]. The incidence of these lesions have been reported to range from 0.03 – 0.2% [3]. There are studies to suggest association of LL with different types of lesions causing hyperestrogenic status such as adenomyosis, endometriosis, polyps, endometrial hyperplasias and gynaecological malignancies including endometrial carcinomas [4, 5]. LL has similar clinical course and presentation as leiomyomas and typically occur in postmenopausal women. Most of the patients are asymptomatic but some experience symptoms such as pelvic discomfort, heaviness and vaginal bleeding.

CASE REPORT

A 73years old female patient P_{5+0}, postmenopausal for 13years presented in gynae OPD with complaints of intermittent vaginal bleeding. There was no significant associated conditions. Past history of cholecystectomy five years back. On examination patient was obese. Uterus was enlarged to 14-16 weeks size. On gynaecological examination vulva, vagina and cervix were normal. Ultrasonography of abdomen and pelvis showed 10x10cms sized intramural becoming submucosal fibroid in anterior wall of uterus completely obliterating endometrial cavity with evidence of fatty degeneration and calcification. Patient underwent total abdominal hysterectomy with bilateral salpingo-oopherectomy.

Gross examination of specimen showed uterus with cervix measuring 9x9x5cms. Endometrial cavity showed a polypoidal growth measuring 4x3cms involving inner half of myometrium (Fig-1) and an intramural fibroid measuring 9cms in diameter having gray yellow to gray white cut surface (Fig-2).

Fig 1: Polypoidal growth in endometrial cavity

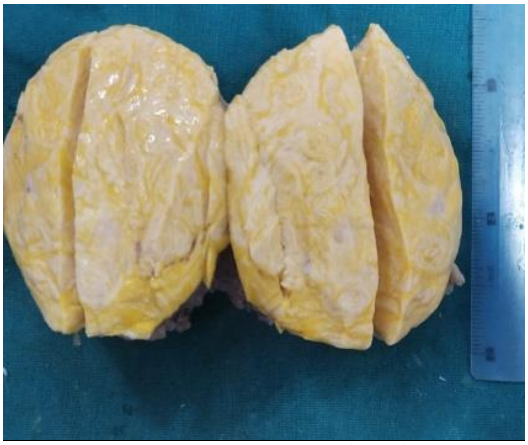

Fig 2: Gray white to gray yellow cut surface of lipoleiomyoma

Microscopically the lipoleiomyoma showed admixture of mature smooth muscle bundles and lobules of adipose tissue (Fig-3). Sections from endometrial growth showed tumour epithelial cells arranged in sheets, confluent glands and papillae having moderate to marked pleomorphism, conspicuous nucleoli, bizarre tumour cells, frequent mitosis and areas of necrosis - a diagnosis of endometroid carcinoma, FIGO Grade 3 was given (Fig-4).

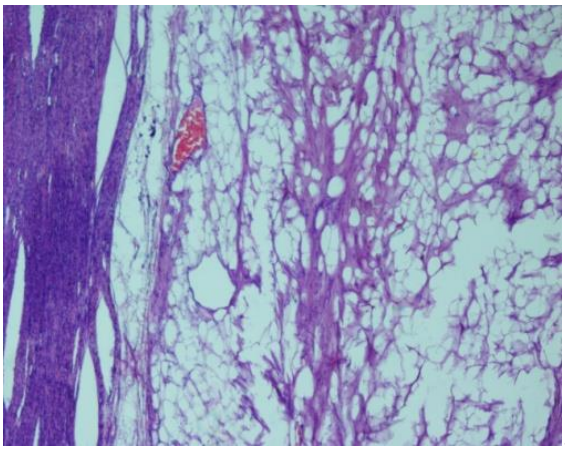

Fig-3: Lobules of mature adipose tissue admixed with smooth muscle bundles

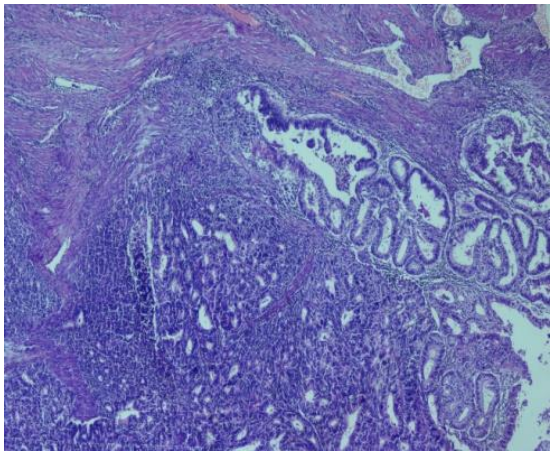

Fig-4: Tumour epithelial cells in endometrial growth

DISCUSSION

Uterine LL is an unusual fatty tumour. These tumours show characteristic histological findings being composed of benign smooth muscle and mature adipose tissue [4]. There are various hypothesis regarding histogenesis of these tumours. But the most accepted hypothesis suggest that the lipoleiomyomas result from fatty metamorphosis of uterine smooth muscle cells which can proceed to form localized or diffuse mature adipocyte tissue in the leiomyoma or in myometrium [6]. LL most commonly arise in uterine corpus; other rare sites are cervix, broad ligament and ovaries [7]. LL are generally single lesions; very rarely multiple lesions can occur. Other lipomatous lesions arising in female pelvis include benign cyctic teratoma, malignant degeneration of cystic teratoma, non teratomatous lipomatous ovarian tumours, benign pelvic lipomas, liposarcomas and lipoblastic lymphadenopathy [8].

Hormonal stimulation especially estrogen, growth hormone and progesterone has been suggested as possible cause for development of LL in some studies. The relationship between gynaecological malignancies which may originate from uterus, cervix or ovaries and coexistant lipoleiomyoma has been reported [4]. Akbulat *et al*., in their study found that 75.7% of LL had different types of lesions associated with hyperestrogenic status including endometrial carcinoma in 11.4% of cases. Anug *et al*., reported LL associated with gynaecological malignancies in 11% cases in their series [4]. Wang et al found this association in 20% of their cases [4].

LL may be associated with metabolic diseases such as hyperlipidemia, hypothyroidisim and diabetes [2]. LL can be diagnosed preoperatively on ultrasonography, MRI and CT scan which can show the fat content of the leiomyoma [9]. LL are benign tumours and if symptomatic require myomectomy or hysterectomy like leiomyomas.

In conclusion LL are rare benign lesions of uterus. They represent a variant of leiomyoma. Patients of LL may have associated conditions leading to hyperestrogenic status like endometrial polyps, hyperplasias and gynaecological malignancies including endometrial carcinomas.

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