

# Lipoleiomyoma: a rare benign tumour of the uterus

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Accepted 8 October 2014

## DESCRIPTION

A postmenopausal 68-year-old woman was presented with intermittent left-sided abdominal discomfort. She denied any vaginal bleeding, dysuria, changes in bowel habits or constitutional symptoms. There was no family history of malignancy. The clinical examination revealed a cheerful, non-cachexic patient with normal vital signs. Her abdomen was soft with no masses palpable.

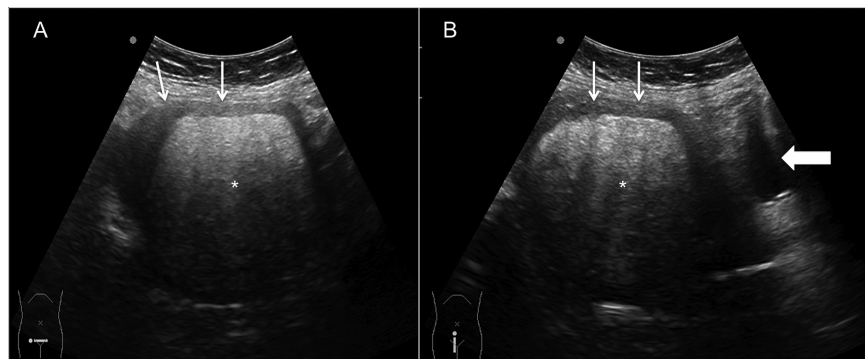
An abdominal and pelvic ultrasound was performed, revealing a markedly hyperechoic mass encased by hypoechoic rind situated posterior to the urinary bladder (figure 1). No significant vascularity was seen within this mass on Doppler study. The contrasted CT of the abdomen confirmed the presence of a large well-defined soft tissue lesion of benign appearance arising from the posterior wall of the uterus. Based on the appearance and density in Hounsfield units, it was composed of a predominantly fatty component (figure 2). The size of the lesion was 6.3×8.3×7.3 cm (width×thickness×length). The endometrium and ovaries were normal. There was no pelvic lymphadenopathy or ascites. As the CT confirmed the uterine origin and characteristic predominant fatty component of the tumour, the patient was diagnosed with benign uterine lipoleiomyoma. Tumour markers such as

CA-125 (cancer antigen 125),  $\alpha$ -fetoprotein, CEA (carcinoembryonic antigen),  $\beta$ -hCG (human chorionic gonadotropin) and lactic dehydrogenase (LDH) were normal. The patient opted for conservative treatment and did not want surgery.

Uterine lipoleiomyoma, a benign fatty tumour of the uterus, is rare, with the overall incidence reported between 0.03% and 0.2%,<sup>1</sup> and comprising of 0.35% of uterine myomatous tumours.<sup>2</sup>

It is mostly described as a variant of uterine leiomyoma<sup>2</sup> with similar clinical course and presentation, and is typically found in postmenopausal patients. Histologically, these tumours are composed of variable amounts of smooth muscle, fat cells and fibrous tissue, developing likely secondary to fatty metamorphosis of smooth muscle cells of leiomyomas.<sup>3</sup>

Lipoleiomyomas have also been reported to occur in the uterine cervix, broad ligament, retroperitoneum and ovary.<sup>4</sup> Apart from uterine lipoleiomyomas, the main differential diagnoses of fat containing pelvic mass in a female are benign cystic ovarian teratomas, followed by other lipomatous ovarian tumours, pelvic lipomas and liposarcomas.<sup>1 4 5</sup> There have been reports to suggest an association between lipomatous uterine tumours and endometrial carcinomas<sup>6</sup>; however, it is



**Figure 1** Images of transabdominal ultrasound in axial (A) and sagittal (B) views showing a markedly hyperechoic mass (asterisks). It is encased by a hypoechoic rind (thin arrows) situated posterior to the urinary bladder (thick arrow).



**Figure 2** Images of the abdominal CT scan in axial (A), coronal (B) and sagittal (C) views demonstrating a well-defined lesion (asterisks) arising from the uterine wall. It is mainly composed of fatty component. The overall appearance is consistent with a uterine lipoleiomyoma.



**To cite:** Johari B, Koshy M, Sidek S, et al. *BMJ Case Rep* Published online: [please include Day Month Year] doi:10.1136/bcr-2014-205814

generally accepted that lipoleiomyomas are benign uterine tumours that do not affect mortality.<sup>5</sup>

Imaging plays a very crucial aspect in the diagnosis of benign pelvic tumours. Ultrasound is the first imaging modality of choice for diagnosis of pelvic tumours or diseases in females. CT and MRI are specific in demonstrating the uterine origin and fatty component.<sup>1 3</sup> A well-demarcated lesion of predominantly fatty component with some areas of soft tissue density arising from the uterus as shown in this case is a characteristic finding. Recognising this typical appearance on imaging will avoid unnecessary invasive diagnostic procedures and largely influence treatment options. For instance, asymptomatic lipoleiomyomas can be managed conservatively<sup>3 5</sup> with follow-up imaging as opposed to surgical excision, which may be preferred in other pelvic tumours such as ovarian teratomas.

### Learning points

- ▶ Uterine lipoleiomyomas are rare fatty variants of benign uterine leiomyomas.
- ▶ The diagnosis of lipoleiomyomas can be confidently made from imaging, namely CT and MRI, with demonstration of uterine origin, well-defined margin and predominant fatty component.
- ▶ With an imaging diagnosis of lipoleiomyoma, invasive diagnostic procedures, that is, biopsies, can be avoided and non-surgical conservative management undertaken.

**Competing interests** None.

**Patient consent** Obtained.

**Provenance and peer review** Not commissioned; externally peer reviewed.

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