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Cellular leiomyoma masquerading as uterine sarcoma: a diagnostic pitfall in imaging and frozen section analysis

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Introduction

Cellular leiomyoma (CL) is a rare benign uterine tumour, accounting for <5% of leiomyomas, and often mimics malignancy on imaging.

Case Presentation

A 53-year-old (G3P3) presented with heavy bleeding and anaemia. Transvaginal ultrasound showed a large subendometrial mass with heterogeneous echotexture and multiple cystic spaces (honeycomb pattern).

Management & Outcome

The absent whorled pattern and irregular architecture raised strong suspicion for uterine sarcoma. The patient underwent TAH+BSO, pelvic/para-aortic lymphadenectomy and omentectomy. Intraoperative frozen section was interpreted as malignant sarcoma.

Pathological Findings

Final histopathology showed spindle cells in fascicles, confirming cellular leiomyoma rather than sarcoma.

Discussion

Honeycomb-like cystic change can closely mimic uterine sarcoma on imaging. Absent infiltrative margins and a low proliferative index confirmed the tumour's benign nature.

Conclusion

Recognising this sonographic pattern is essential to differentiate cellular leiomyoma from sarcoma and avoid unnecessary radical surgery.



Figure 1. Transvaginal ultrasound: honeycomb-like cystic mass adjacent to bladder and myometrium.

Immunohistochemistry

Positive: Desmin, ER

Focal positive: CD10

Negative: h-Caldesmon, ALK

Ki-67 proliferative index: <1%