

Introduction
Uterine leiomyomas are the most common benign tumors of the female genital tract; however, dissecting (cotyledonoid) leiomyomas are an exceptionally rare morphological variant, first characterized in 1975. With their multinodular, placental-like gross appearance and infiltrative growth pattern, these tumors can closely mimic malignancies such as leiomyosarcoma, posing a significant diagnostic dilemma. We present a rare and visually striking case of dissecting leiomyoma, highlighting its unique clinical, radiological, and histopathological features, along with its diaagnostic implications.
Case presentation
Dissecting (cotyledonoid) leiomyomas are rare benign smooth muscle tumors with an infiltrative, exophytic growth pattern that often mimics uterine malignancy both radiologically and macroscopically. Their dramatic gross appearance—resembling placental cotyledons with red, gelatinous, lobulated tissue—can raise strong concern for sarcoma, especially when serosal extension or vascular proximity is observed. However, despite their alarming presentation, histological evaluation typically reveals benign features: bland spindle cells, low mitotic activity, absence of atypia or coagulative necrosis, and no true vascular invasion. Immunohistochemistry confirms smooth muscle origin, with diffuse positivity for SMA, desmin, and h-caldesmon, and a low Ki-67 proliferation index. Recognizing this rare entity is essential to avoid misdiagnosis and overtreatment. In younger patients, mistaking it for malignancy may lead to unnecessarily radical surgery and loss of fertility. When feasible, conservative surgery guided by intraoperative pathology or biopsy may be considered. Our case highlights the importance of correlating radiological, surgical, and histopathological findings to ensure appropriate management and avoid undue patient anxiety.

Case report
A 45-year-old premenopausal woman, gravida 3 para 2, presented with progressive menorrhagia, pelvic pressure, and a sensation of uterine fullness. Her history was unremarkable, and she had completed childbearing. Pelvic examination revealed a symmetrically enlarged uterus. Imaging (ultrasound and MRI) demonstrated a large, heterogeneous uterine mass with cystic and lobulated features, raising suspicion for an atypical leiomyoma or low-grade sarcoma. Tumour markers, including CA-125, were within normal limits. She underwent a total laparoscopic hysterectomy with bilateral salpingectomy due to her symptoms and the unclear nature of the mass. Intraoperatively, the uterus was enlarged and distorted by an exophytic, multinodular mass arising near the fundus and extending through the left cornu. The lesion had a vivid “beefy,” placental-like appearance with gelatinous, cystic, and hemorrhagic regions—raising intraoperative concerns about malignancy. Gross pathology confirmed a multilobulated, cauliflower-like lesion measuring 10.5 × 8.2 × 6.5 cm. Histological examination showed bland spindle cells in interlacing fascicles, thick-walled blood vessels, and pseudopapillary surface projections, without atypia or tumor necrosis. Mitoses were rare (up to 2 per 10 high-power fields), and there was no lymphovascular invasion. Immunohistochemistry demonstrated diffuse positivity for SMA, Desmin, and h-caldesmon, consistent with smooth muscle origin. The Ki-67 proliferation index was low (<1%). The findings supported a diagnosis of dissecting (cotyledonoid) leiomyoma—a rare benign variant with a deceptively malignant gross appearance. The patient recovered uneventfully and was discharged with routine follow-up.

Conclusion
Dissecting (cotyledonoid) leiomyomas are rare but diagnostically significant uterine lesions that can easily be mistaken for malignancy due to their unusual gross and radiological features. Despite their alarming appearance, they are histologically benign and require a nuanced diagnostic approach to prevent unnecessary radical treatment. By sharing this rare and visually striking case, we aim to raise awareness among clinicians, surgeons, radiologists, and pathologists, encouraging careful consideration of this entity in the differential diagnosis of atypical uterine masses. This case serves as a reminder that not all “beefy” or bizarre lesions are malignant—and that a thorough clinicopathological correlation is key to appropriate management.
References
•Chahkandi et al. (2023) This case report discusses a 55-year-old woman with a large, heterogeneous intramural mass exhibiting a "beefy" appearance, consistent with a dissecting leiomyoma. Histopathological examination confirmed the diagnosis, and the patient had an uneventful postoperative recovery. •Weissferdt et al. (2008) This report presents a case of dissecting leiomyoma with adenomyosis, highlighting the importance of distinguishing this benign entity from malignant lesions. The authors emphasize the role of histopathological assessment in avoiding misdiagnosis and unnecessary radical treatment. •Soleymani Majd et al. (2011) This study introduces an epithelioid variant of dissecting leiomyoma, which can mimic malignancy due to its unusual growth pattern. The authors stress the need for awareness of this variant to prevent overtreatment. •Driss et al. (2009) This case report discusses a dissecting leiomyoma associated with endosalpingiosis, illustrating the diverse presentations of this rare tumor and the importance of comprehensive histopathological evaluation. •Review of Clinical, Pathological, and Radiological Features (2012) This review summarizes the clinical, radiological, and pathological features of 41 previously reported cases of dissecting leiomyoma. The authors note that while these tumors can have a placenta-like appearance, they are benign and can be differentiated from malignancies through histopathological examination.

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