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Parasitic Leiomyoma, A Less Well Known Entity: A Case Report

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Abstract **Case Report**

Parasitic leiomyomas, also known as free leiomyomas, occur outside the uterus and are rarely seen in clinical practice. They usually occur in genitally active women who have undergone hysterectomy or myomectomy. It is difficult to determine the nature of the mass on the basis of imaging studies alone. Diagnosis of certainty is based on anatomopathological examination. Management is essentially surgical. We report the case of a 44-year-old woman with a history of subtotal hysterectomy for fibroleiomyomatous uterus and a lumbar disc herniation, presenting with an extra uterine abdomino-pelvic leiomyoma diagnosed on histology, whereas the CT diagnosis suggested a GIST (gastrointestinal stromal tumour) or desmoid tumour. Our case highlights the importance of considering ectopic leiomyoma as a differential diagnosis in the face of an abdomino-pelvic mass after hysterectomy.

Keywords: Parasitic leiomyoma, fibroids, abdomino-pelvic mass, hysterectomy.

INTRODUCTION

Fibroids, also known as uterine leiomyomas, are the benign pelvic tumors most commonly encountered in clinical practice. They are composed of smooth muscle and connective tissue. They occur in patients of childbearing age, with an estimated prevalence of between 4.5% and 68.6% (Barik & Singh, 2022). However, these tumours rarely develop outside the uterus. The presentations of ectopic leiomyomas most reported in the literature are: benign metastatic leiomyomas, disseminated peritoneal leiomyomatosis, intravenous leiomyomatosis, parasitic leiomyomatosis and retroperitoneal masses. The actual cause of parasitic leiomyomas is unknown to date, although there are several widely recognized hypotheses (Kelly & Cullen, 1909), (Kho & Nezhat, 2009). Radiological exploration is often insufficient to give a precise diagnosis. Diagnosis of certainty relies on anatomopathological examination, which provides a definitive diagnosis based on precise immunohistochemical elements (Roue *et al.*, 2007). Treatment is surgical (Patel & Todd, 2022). We present the case of a 44-year-old woman with a history of subtotal hysterectomy for uterine fibroids and a lumbar disc herniation, presenting with an abdomino-pelvic parasitic leiomyoma diagnosed on pathological examination.

CASE REPORT

Mrs. P. was a 44-year-old female patient found to have a firm abdominopelvic mass lateralized to the left and extending up to the umbilicus on routine examination. Her history included a lumbar disc herniation and subtotal hysterectomy for fibroleiomyomatous uterus. Ultrasound showed an iso echogenic formation, with clear contours and vascularity on color Doppler, occupying the median and left part of the pelvis and coming into contact with the abdominal wall. The ovaries were normal. An abdominal CT scan revealed a well-limited mass in the hypogastrium and left iliac fossa, isodense to spontaneous contrast, heterogeneously enhanced after injection of contrast, measuring 12 × 12× 7 cm. The mass was in close contact with the intestinal ansae and anterior abdominal wall, suggesting a GIST or a desmoid tumour (Figure 1).

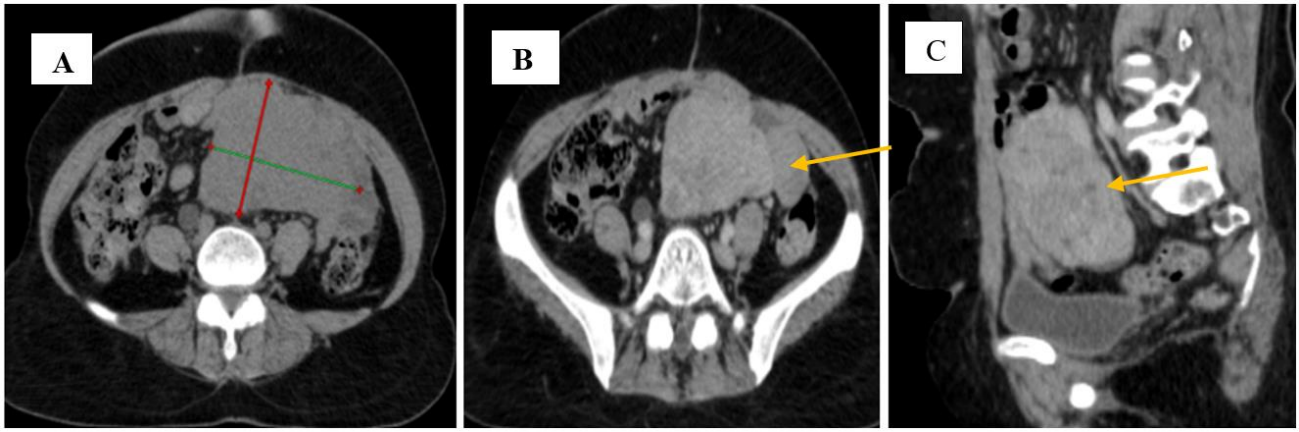

Figure 1: Abdominal CT scan without and with injection in axial (a and b) and sagittal (c) sections: supravesical mass lateralized to the left, isodense to spontaneous contrast, heterogeneously enhanced, showing intimate contact with the intestinal ansae and anterior abdominal wall

Tumour markers CA 125 and CA 19-9 were normal. Preoperative biopsy of the mass showed morphological and immunohistochemical evidence of a well-differentiated smooth muscle tumour with a ki 67 of 30%. Laparotomy revealed a mass embedded in the left abdominal wall, highly vascularized but well limited (figure 2). Pathological examination of the surgical part revealed an encapsulated, solid, whitish, fasciculated mass, with macroscopic areas of central necrosis less than 30% of the tumour volume; microscopic analysis confirmed the preoperative data. Postoperative management was simple, with monitoring every 6 months.

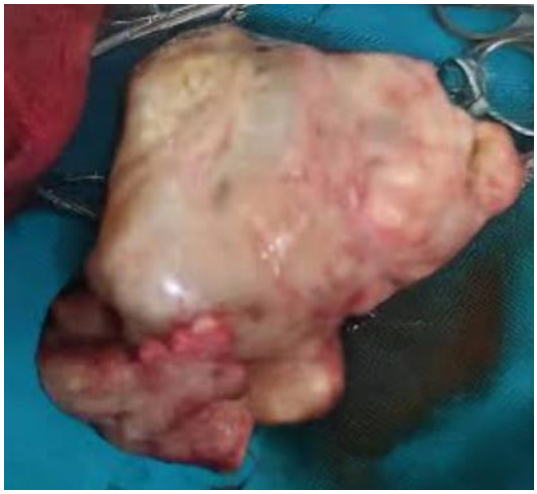

Figure 2: Surgical part

DISCUSSION

Parasitic leiomyomas were originally mooted by Kelly and Cullen (1909); they were thought to derive from subserous fibroids that had detached from their uterine vascular pedicle and survived through neovascularization of adjacent organs. Currently, the most convincing reason may be that parasitic leiomyoma is a rare complication caused by residual fragments after fibroid removal (Kho & Nezhat, 2009). The incidence rate of iatrogenic parasitic leiomyomas is between 0.12% and 0.9% (Nezhat & Kho, 2010). The FDA safety statement published in 2014 recommends avoiding laparoscopic morcellation during myomectomies or hysterectomies (Kai *et al.*, 2020). Any anatomical structure in the peritoneal cavity can be the site of parasitic myoma development. They are generally found in the pelvic or abdominal wall peritoneum, omentum, pouch of Douglas, small intestine or colon (Sofoudis *et al.*, 2020).

Clinically, there are no particular symptoms, and patients are often asymptomatic, although abdominal pain or bloating may be observed (Patel & Todd, 2022).

Imaging techniques can not differentiate it from other possible causes. The ultrasound appearance is that of a mass with regular contours, which may be hypo, iso or hyperechoic in relation to the surrounding myometrium (Roue *et al.*, 2007). The CT scan is typical but non-specific, showing a hypodense, well-circumscribed lesion with heterogeneous hyperdense enhancement (Warshauer & Mandel, 1999). MRI is the

examination of choice. A simple leiomyoma is characterized by T2 hyposignal and intermediate signal or T1 hyposignal. However, the distinction with a malignant form remains difficult, especially as there is tissue degeneration within this leiomyoma (Robert & Launay, 2002). In our case, we suggested a GIST, which is common in our context, in view of the mass, which was in close contact with the intestinal ansae; a desmoid tumour was also suggested, given the close contact to the abdominal wall and the history of surgery. MRI was not performed, as the patient was claustrophobic.

Anatomopathological analysis confirms the benign origin and eliminates differential diagnoses The diagnosis is based on precise elements: tumor composed of fusocellular cells identified as smooth muscle fibers by labeling with antidesmin and antiactin smooth muscle antibodies, specific for smooth muscle fibers in immunohistochemistry In the context of ectopic pathology, when faced with tumours composed of fusocellular cells, four main differential diagnoses must be eliminated: ovarian fibroma, ovarian fibrosarcoma, ovarian fibrothecoma and digestive stromal tumours (Schubert & Moghimi, 2006).

Parasitic fibroids are generally treated by surgical removal, either by open surgery or laparoscopy (Patel & Todd, 2022). Parasitic myomas appear to have a low recurrence rate, with only a few cases documented. These recurrences appear to be linked to incomplete initial excision. The evolutionary potential remains unknown, and no therapeutic protocol has been described based on histopathological analysis and prognostic criteria (Roue *et al.*, 2007).

CONCLUSION

Parasitic myoma is a rare subtype of uterine leiomyoma that presents with vague symptoms. Diagnosis by imaging is difficult, and treatment consists of surgical resection. Although several hypotheses exist, the actual etiology is still unclear. Patients with a history of uterine fibroid surgery should be aware of this entity when presenting with an abdomino-pelvic mass.

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