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Case Report

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PREOPERATIVE DIAGNOSTIC CRITERIA FOR LEIOMYOSARCOMA: CASE REPORT

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ABSTRACT

Leiomyosarcoma is a rare mesenchymal tumor associated with a poor prognosis. Its annual incidence is estimated at 0.50 to 7/100,000 women.(6.12) Its diagnosis is difficult. There is a similarity in the clinical and radiological characteristics between a leiomyosarcoma and a benign leiomyoma. However, the best examination for the evaluation of this pathology remains magnetic resonance imaging. The préoperative diagnosis allows to avoid conservative surgical treatment, myomectomy and morcellation of leiomyoma, further worsening the prognosis of this pathology.Only histology allows the diagnosis of certainty. through our case and a review of the literature, we report the diagnostic difficulties and the clinical and radiological criteria on which to base the preoperative diagnosis.

KEYWORDS: leiomyosarcoma, preoperative, diagnostic criteria,

Clinical Case

43-year-old single woman, nulligest, without medical and surgical history. Consults for increased abdominal volume with feeling of heaviness without menstrual cycle disorder. The abdominal examination reveals an abdominopelvic mass arriving at the umbilicus. The vaginal examination was not done; the patient said she was a virgin. The ultrasound objectified a polymyomatous uterus; the largest mass is type 3 measuring 12cm x 10cm poorly limited contours with heterogeneous echostructure, containing anechoic cystic areas (figure 1). In front of this suspicious uterine mass, an MRI complement was mandatory having allowed the preoperative diagnosis of leiomyosarcoma (figures 2,3).

The patient underwent a total hysterectomy with bilateral adnexectomy. The histological study allowed the diagnostic confirmation of leiomyosarcoma: it is a large tumor of 11 cm presenting cytonuclear atypia, mitoses are estimated at 15 mitoses per 10 fields. It is associated with large areas of tumor necrosis estimated at 30% of the tumor surface.

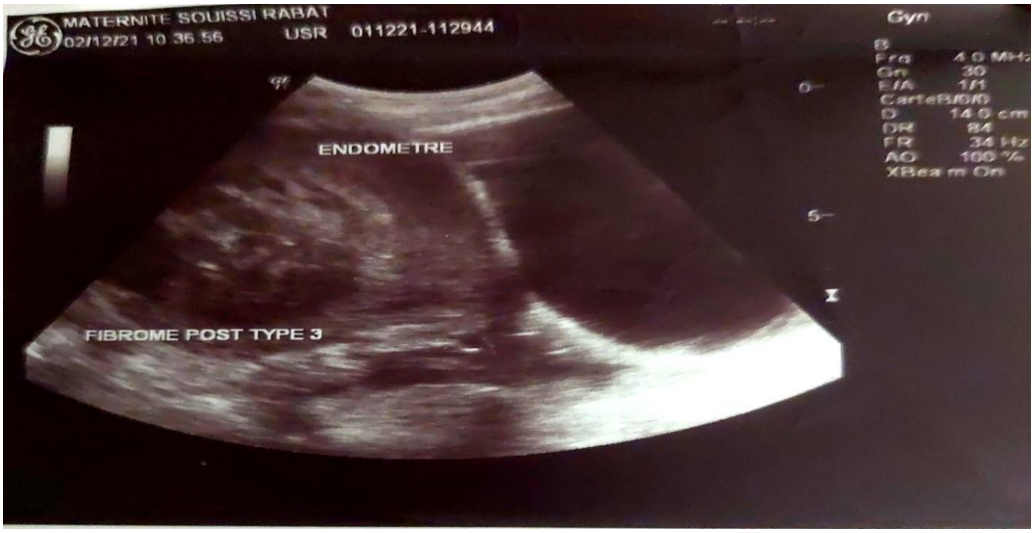

Fig 1: large intrauterine mass, cystic areas with irregular walls.

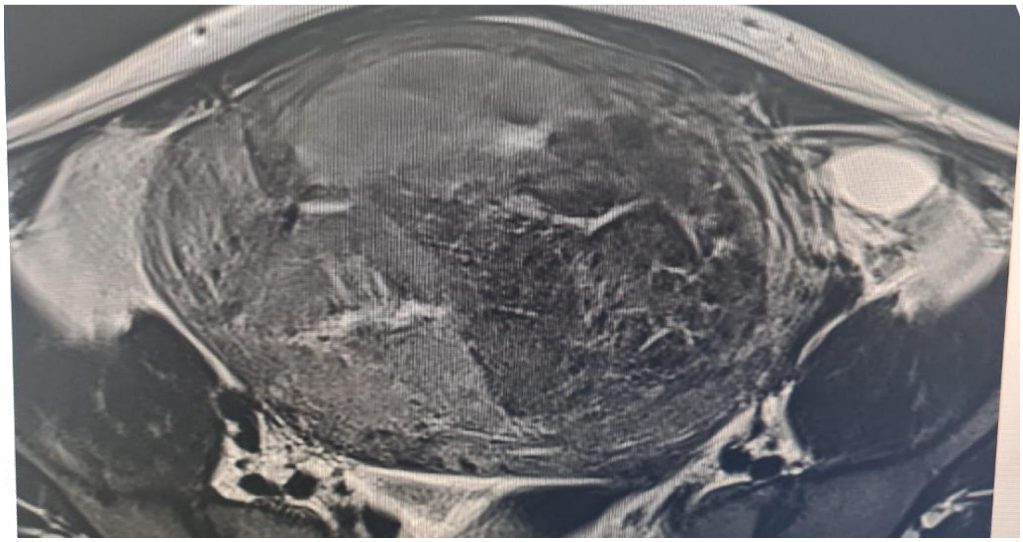

Fig 2: T2-weighted sequence: heterogeneously hyperintense.

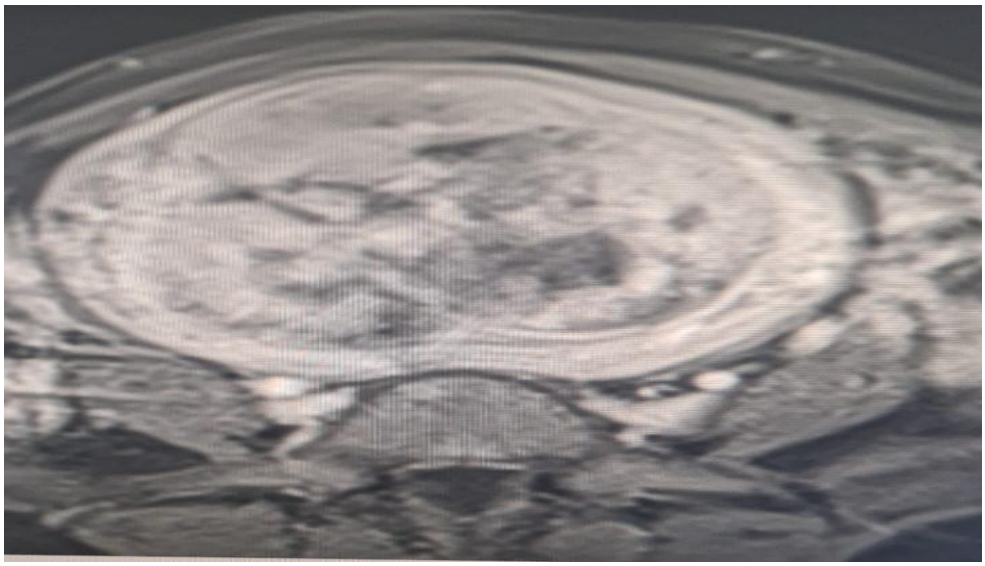

Fig 3: Early Heterogeneous Enhancement on Contrast-Enhancement MRI.

INTRODUCTION

Leiomyosarcoma is the most common uterine sarcoma. Its annual incidence: 0.5 to 7/100,000 women. This pathology is associated with a poor prognosis. The 5-year survival rate in general is 25% to 76%, it is only 10 to 15% in case of a metastatic tumor.[3]

It is very difficult to differentiate a leiomyosarcoma from a simple leiomyoma. MRI remains the best tool for establishing the diagnosis of leiomyosarcoma. Definitive histology after surgery allows the diagnosis of certainty.

DISCUSSION

Leiomyosarcoma poses a diagnosis problem. Its differentiation from a simple leiomyoma is often difficult.the clinical presentation is similar for the 2 pathologies.

it can be a disorder of the menstrual cycle, heaviness or pelvic pain, infertility, urinary symptoms such as dysuria or digestive symptoms such as constipation, however 3 clinical criteria must alert us to the risk of malignant pathology even if they can also be found in the case of leiomyoma: perimenopause (the peak incidence of leiomyosarcoma), a rapidly growing leiomyoma and a symptomatic leiomyoma in post menopause.

Ultrasound is the first-line examination to assess uterine masses; some criteria must suspect the possibility of leiomyosarcoma even if its can also be found in case of complicated leiomyoma of benign myxoid degeneration; hyaline or in aseptic necrobiosis. These criteria are: large size poorly defined contours of the mass, heterogeneous echostructure with the presence of anechoic cysts and increased vascularization.

The clinical and ultrasound criteria predictive of malignancy indicate second line MRI. Diagnostic criteria in MRI: Poorly limited margins, T2 hypersignal, Heterogeneous early enhancement and no central enhancement in favor of necrosis. These criteria require

additional exploration by the DWI b1000 diffusion-weighted image showing a hypersignal with a low ADC map diffusion coefficient; which can confirm malignancy.

Tong et al report the MRI characteristics of 10 histologically confirmed leiomyosarcomas: the 10 tumors were characterized by irregular margins and the T2 hypersignal.7 had the radiological appearance of necrosis.[10]

Thomassin-negara et al report that the combination of the analysis of T2 signal, the signal in DWI b1000 and the ADC map, allows 92.4% to distinguish between benign or malignant tumor of the myometrium.[6]

The histology is the only examination that allows the diagnostic confirmation of leiomyosarcoma; the histological criteria of malignancy: hypercellularity, cytological and nuclear atypia, high mitotic index >15 mitoses/10 fields and tumor necrosis.[2]

CONCLUSION

Leiomyosarcoma is difficult to diagnose. The suspicion of the malignancy of a leiomyoma is based on clinical and ultrasound criteria. MRI allows the diagnosis preoperatively. Only the histology that confirms the definitive diagnosis of leiomyosarcoma.

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