

## Case Report: A Round Ligament Leiomyoma Presenting as an Uncomplicated Left Inguinal Hernia

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### Abstract

Tumors of the round ligament are rare and exceptional; leiomyomas are the most common tumor. We report in our case the case of an inguinal woman with a left inguinal mass previously explored by todensitometry and magnetic resonance imaging which was found to be related to a leiomyoma of the round ligament. The patient had an excision of the tumor mass with simple follow-ups. The anatomo-pathological data confirmed the diagnosis.

**Keywords:** Hernia, leiomyomas, round ligament, inguinal canal

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### INTRODUCTION

Leiomyomas are the most common tumors affecting the round ligament followed by endometriosis and mesothelial cysts; they represent more than a third of these tumors [1] [2] [3]. Preoperative diagnosis is difficult despite the contribution of todensitometry and magnetic resonance imaging [4]. We report the features of a leiomyoma of the round ligament operated by laparotomy in a woman of pre-menopause age.

### METHODS

#### Observation

Mrs. N.H aged 43, G2 (gestation) P2 (pariete), without significant pathological antecedents, presents with a solid left inguinal mass, painless and miming an inguinal left uncomplicated hernia evolving for 1 year without accompanying signs. The mass was explored by todensitometric imaging revealing a heterogeneous tissue mass of 6 cm attached to the broad ligament issuing from the left inguinal canal (Fig 1) (Fig 2).



Fig-1: Cross-section of an inguinal mass of heterogeneous density at the expense of the broad ligament issuing from the inguinal canal

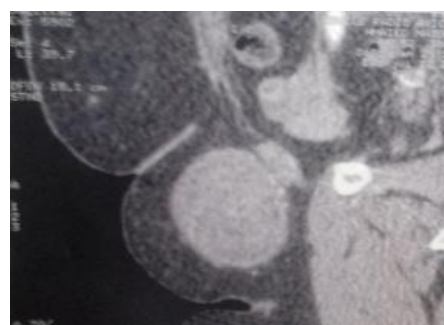


Fig-2: Median sagittal section of an inguinal mass of heterogeneous density at the expense of the broad ligament issuing from the inguinal canal

A complement of magnetic resonance imaging realized objective mass of 6 cm, T1 hyposignal signal and heterogeneous T2 signal, it is in communication with the extra-peritoneal end of the round ligament (Fig 3) (Fig 4).

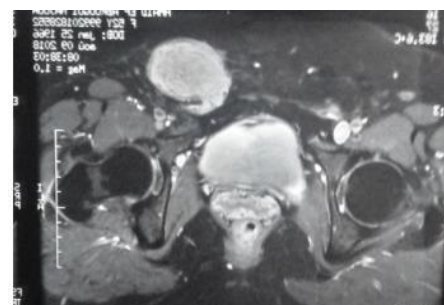


Fig-3: Left inguinal mass in hypersignal T2 at the expense of the round ligament on a section of MRI.



**Fig-4:** Left inguinal mass in hyposignal T1 on a section of MRI.

The patient was operated by the inguinal way, the peroperative exploration notes an encapsulated and well limited pinkish mass making 7 cm at the expense of the round ligament in its extra peritoneal portion at its termination (Fig 5) (Fig 6).



**Fig-5:** Intraoperative observation, left inguinal, of a well-defined rounded pink mass of 7 cm.



**Fig-6:** Intraoperative observation, left inguinal, of a well-rounded pinkish mass at the expense of the round ligament.

The patient had an excision of the tumor mass after extemporaneous examination affirming the absence of malignancy and a cure according to Lichtenstein. The postoperative course was simple. Follow-up over 2 years did not reveal a recurrence. Histopathological data confirmed leiomyomatous proliferation of the round ligament.

## DISCUSSION

The leiomyomas of the round ligament most often affect women of pre-menopausal age, which is consistent with our case [5]. They occur most often on the right side for unknown reasons, in our observation

the location is on the left making our case more particular [1] [2]. Tumors of the round ligament may be either extra abdominal; that is to say inguinal or vulvar which is the case of our observation or intra abdominal: for the pelvic segment of the round ligament or subperitoneal for the tumors which are born with the deep opening thus the course of the round ligament [6]. In the majority of cases; leiomyomas of the round ligament arise at the extraperitoneal end of the latter similar to our findings [1] [7]. The occurrence of this type of tumor is related to a somatic mutation of the smooth muscle cells of the female genital tract involving growth hormone and estrogen [8]. Clinically, when they are intra-abdominal, this type of tumor is often asymptomatic, causing neither gene nor pain; but the presence of an abdominal mass can be noted; they can be manifested by the presence of an inguinal mass perceived by the patient when the leiomyomas are extra abdominal as was the case of our observation, by the presence of an inguinal mass leading the patient to consult [1] [9]. The tumor excised in our case is 7 cm; The average size of leiomyomas of the round ligament is 5 cm [10] but it has been noted that they can be more massive [6]. Tumors of the round, extra-abdominal ligament are confused with lymphadenopathies, lipomas, inguinal hernias, and endometriomas; in our case, the clinical presentation was that of a left inguinal hernia; explaining our use of imagery [5]. Preoperative diagnosis is often difficult, despite the quality of overdensitometry imaging and that by magnetic resonance, it is difficult to objectify the connections between the mass and the round ligament; in our case a doubt of connection with the broad ligament to the todensitometric imaging has been noted, hence our use of MRI [4] [5]. The contribution of CT is to objectify the tissue character of the leiomyoma with cystic tumors; it allows to evaluate the size and the extension of this one, it shows typically a tumor of heterogeneous density with or without calcification similar to our exploration [1] [9]. Magnetic resonance imaging shows a T1 iso-signal and a heterogeneous hyper-signal in T2 [4]. In our case, the imaging made it possible to determine the solid character, the size, the extension and the connection of the tumor with the round ligament; the malignant or benign nature of the mass has not been specified; hence our use of exploratory surgery. The treatment of this type of tumor is surgical excision either by laparoscopy [4] [1] [12]; either by laparotomy [2] [6]. Laparoscopic treatment of this type of tumor is considered possible, but the need for long-term follow-up is required [11]. In our case we preferred the use of the elective inguinal route avoiding the risk of possible dissemination laparoscopically. The aim of the Lichtenstein cure is to strengthen the parietal dehiscence caused by the tumor.

## CONCLUSION

Round ligament leiomyoma is a rare clinical entity whose pathophysiology is hypothetical. The clinic varies according to the site of implantation of the

tumor on the round ligament. Imaging despite these technical feats retains some limitations for diagnosis. The treatment is laparoscopic surgical and laparotomy, remains a long-term follow-up of the results of the laparoscopic approach. The problem posed by the preoperative diagnosis persists.

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