

## Case Report

DOI: <http://dx.doi.org/10.18203/2349-2902.ijssurgery20162765>

# A rare inguinal mass: leiomyoma of round ligament of uterus

Harin R. R.\*<sup>1</sup>, Balaji Singh K.<sup>1</sup>, Mohanapriya T.<sup>1</sup>, Mahin Nallasivam R. R.<sup>1</sup>

Department of General Surgery, Sri Ramachandra Medical College, Chennai, Tamil Nadu, India

**Received:** 25 January 2016

**Revised:** 20 April 2016

**Accepted:** 03 June 2016

**\*Correspondence:**

Dr. R. R. Harin,

E-mail: harin2710@gmail.com

**Copyright:** © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

### ABSTRACT

Smooth muscle tumours of the round ligament of the uterus are rare and can mimic an inguinal hernia. Preoperative diagnosis can be established by imaging of the abdomen or an exploration of the inguinal canal. Surgical excision is the curative treatment.

**Keywords:** Round ligament, Leiomyoma, Inguinal hernia

### INTRODUCTION

The round ligament extends from the uterus through the inguinal canal and terminates in the region of the mons pubis and labia majora. Embryologically, it is the female equivalent of the gubernaculum testis. This structure is responsible for the descent of the ovary from the posterior abdominal wall to the uterus. It is mainly composed of smooth muscle fibers, connective tissue, vessels, and nerves with a mesothelial coating.<sup>1,2</sup> Leiomyoma of the round ligament is a rare condition occurring predominantly in premenopausal middle-aged women. Abdominal, inguinal, and vulvar locations have been described.<sup>3</sup> We report a case of smooth muscle tumour of the left inguinal area, presenting as a painless mass which increased gradually in size. The anatomic location was unique, as the clinical presentation closely resembled an inguinal hernia.

### CASE REPORT

A 46 year old female came with history of swelling in the left groin since 1 year, which was insidious in onset, gradually progressive. Patient gives history of increased prominence on squatting and lifting of heavy weights. No history of any other swellings, pain, vomiting, altered bowel and bladder habits or chronic cough. Patient is not a known case of diabetes mellitus, systemic

hypertension, epilepsy, tuberculosis or bronchial asthma. She underwent caesarian section 24 years back. Menstrual cycles were regular, last menstrual cycle was on 16th April 2015.

On local examination, there was a swelling in the left inguinal region of size 4×3 cm, solitary, nodular in surface, irregular in shape, firm in consistency, no visible and palpable pulsations, and borders well made out. Cough impulse was present and it was reducible. Ultrasonogram showed well defined hypo echoic lesion, 3×2×2 cm in the inner aspect of the left labia. No vascularity was noted within.

A differential diagnosis of left inguinal hernia and soft tissue swelling was made. Patient was planned for surgery of the groin, after obtaining anaesthesia fitness.

On deep exploration through the layers of the swelling, a firm, nodular and irregular mass was found and excised after clamping the round ligament. Specimen was preserved for histopathological examination.

#### *Histopathological report*

Features suggestive of benign spindle cell lesion, suggestive of a leiomyoma. IHC tumour cells are positive for vimentin and SMA.



**Figure 1: Gross specimen.**



**Figure 2: Histopathological report.**

## DISCUSSION

Tumours of the round ligament of uterus are rare. Other conditions which can present as an inguinal hernia are tumours from different structures of the inguinal canal, peritoneal lipoma, lymphadenitis, hematoma, abscess, neurofibroma, dermoid tumour, femoral artery aneurysms, uterine fibroids, endometriosis, saphena magna thrombophlebitis.<sup>4,5</sup>

Transformation of myofibrous structure of the female genital tract to leiomyoma involves somatic mutations of normal smooth muscle and complex interactions between sex steroids and local growth factors. Oestrogen is a major promoter if myoma grows. Benign and malignant differentiation is based on mitotic figures,

nuclear atypia and necrosis. Mass lesions that involve extra peritoneal portion of round ligament as it passes through the inguinal canal can mimic an inguinal hernia or inguinal adenopathy.<sup>7,8</sup> In the above mentioned case, it has presented like an inguinal hernia. CT scan can be used for diagnosis. Surgical excision is a curative treatment.

## CONCLUSION

In conclusion, it should be noted that leiomyoma of the round ligament of uterus should be entertained as a possible etiology of inguinal mass.

*Funding: No funding sources*

*Conflict of interest: None declared*

*Ethical approval: Not required*

## REFERENCES

1. David MW, Stanley RM. Leiomyoma of extra-peritoneal round ligament: CT demonstration. Clin Imaging. 1999;23:375-6.
2. Williams PL, Bannister LH, Berry MM, Collins P, Stain M, Dussek JE, et al. editors. Grey's Anatomy. 38th ed. New York: Churchill Livingston; 1995: 1874.
3. Alexander L, Maria GHA, Christian K, Gerhard B, Johann L. Leiomyoma of the round ligament in a post-menopausal woman. Maturitas. 1999;31:133-5.
4. Ali SM, Malik KA, Al-Qadhi H, Shafiq M. Leiomyoma of the round ligament of the uterus: case report and review of the literature. Sultan Qaboos University Medical Sciences Journal. 2012;1(3):357-9.
5. Harish E, S Sowmya N, B Indudhara P. A rare case of round ligament leiomyoma: an inguinal mass. Journal of Clinical and Diagnostic Research. 2014;8(10):5-6.
6. Al Manasra AR, Malkawi AS, Khammash MR. Leiomyoma. A rare cause of inguinal mass in females. Saudi Medical Journal. 2011;32:633-5.
7. Vignali M, Bertulessi C, Spreafico C, Busacca MA. Large symptomatic leiomyoma of the round ligament. J Minim Invasive Gynecol. 2006;13:375-6.

**Cite this article as:** Harin RR, Balaji Singh K, Mohanapriya T, Mahin Nallasivam RR. A rare inguinal mass: leiomyoma of round ligament of uterus. Int Surg J 2016;3:1644-5.