Large leiomyoma of the broad ligament

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Clinic

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Article history

Received 16 February 2013
Accepted 03 July 2013
Early online 25 July 2013
Print 31 August 2013

Abstract

Broad ligament is a very uncommon site for presentation of leiomyoma. On account of their size and nature (pedunculated or sessile), clinically leiomyomas may present variably. We are presenting a rare case of leiomyoma of broad ligament in a 52 year old female patient who presented with complaints of lower abdominal pain of long duration, associated with menstruation. On clinical and radiological examination it was found to be a right sided mass in the pelvic region suspected to be a tubo-ovarian mass. On histopathology, it was confirmed to be a soft tissue tumor – Leiomyoma. We present this case on account of its rarity and the diagnostic difficulties posed.

Keywords: Broad ligament, leiomyoma

Leiomyomas are most often benign tumors of the female genital tract. Uterine leiomyomas are the most common myomas, accounting for approximately 20–30 % of cases in females less than 35 years. Leiomyoma of the broad ligament is extremely rare1. On account of its rarity, it poses specific diagnostic difficulties and may be responsible for erroneous diagnosis and management2. Clinically these lesions may manifest as extra-uterine pelvic masses that compress the urethra, bladder neck or ureter, producing symptoms of varying degrees of urinary outflow obstruction. On rare occasions, these tumors may present with unusual clinical manifestations or unusually large size.

Case report

A 52 year old female, known asthmatic and hypertensive, presented to the surgical OPD of Krishna Institute of Medical sciences, Karad, Maharashtra with complaints of severe pain in abdomen during menstruation. She had three full-term normal vaginal deliveries with no history of any abortion. Her menstrual history was 3–4 days / 30 days, regular, associated with pain in lower abdomen since 2 years. On presentation the pain was of severe intensity. Her past surgical history included tubectomy undergone 10 years back. There was no history of tuberculosis or any contact with active tuberculosis patient. She had no history of any hormonal therapy. Her family history was not significant.

On abdominal palpation, a large soft to firm, tender mass was felt, approximately 10x5 cm, in the right lower pelvic region. On per vaginai examination the cervix and vagina were healthy. Her per vaginal examination revealed the uterus to be laterally deviated to the right. On hematological investigation, the hemoglobin was 8.9 gm/dl, total leucocyte count-14,500/cmm, peripheral smear showed mild microcytic hypochromic anemia. The platelets were within normal limits. Urine examination revealed plenty of calcium oxalate crystals and few epithelial cells. The liver and renal function tests were within normal limits. Ultrasonographic examination revealed a large soft tissue mass in the right lower pelvic region suspected to be a tubo-ovarian mass.
showed a uterus measuring 9.5x7x4.1 cm with a 2.5 cm submucosal fibroid obliterating the endometrial canal. A single, large, homogenous, isoechoic mass was seen, measuring 7.8x6x5 cm along the right side of the uterus. The right ovary and tube were not visible. The left ovary and tube were normal. No free fluid was noted in the pelvis. Based on these findings, a diagnosis of right tubo-ovarian mass was given. The patient was operated for abdominal pan-hysterectomy with enucleation of broad ligament mass.

Microscopy

Multiple sections from the broad ligament mass showed a benign soft tissue tumor composed of spindle cells arranged in interlacing bundles, sheets and whorling pattern (Fig 3). Individual cells were elongated with cigar shaped nuclei and moderate amount of eosinophilic cytoplasm (Fig 4). The nuclei were uniform. Mitotic activity was sparse. Nuclear palisading, hyaline change and myxoid changes were noted focally. On the above mentioned findings a histopathological diagnosis of benign soft tissue tumor-Leiomyoma of the broad ligament with secondary changes was given. Sections through the endometrium were unremarkable. Another submucosal leiomyoma was also noted. Sections through the cervix, ovaries and fallopian tubes were unremarkable. Sections through the right broad ligament showed increased vascularity.

Gross findings

We received a pan-hysterectomy specimen totally measuring 10x7x4.1 cm. Externally the broad ligament at the mesovarium showed a single oval, grey white well-circumscribed soft tissue mass attached to the right broad ligament with a small vascular pedicle (Fig 1). The mass measured 8.5x6.5x5 cm and weighed 170 gm. Cut section of the mass revealed a grey white firm whorled appearance with areas of myxoid change and edema (Fig 2).

Fig 1. Photograph showing a large mass arising from broad ligament

Fig 2. Photograph showing cut section of the mass showing firm grey white tumor with whorled appearance

Fig 3. Photomicrograph showing spindle cells arranged in interlacing bundles and sheets. (H&E stain, 10x).

Fig 4. Photomicrograph showing elongated, cigar shaped nuclei with moderate amount of eosinophilic cytoplasm. (H&E stain, 100x).
Discussion

Leiomyoma is a benign smooth muscle tumor that most commonly arises from the uterus but may also be found in the cervix, uterine ligaments and rarely in the ovaries or fallopian tubes. The overall incidence of broad ligament leiomyoma is however less common. Although benign, leiomyomas pose a major public health burden. Leiomyoma occasionally occurs with unusual growth pattern or in unusual locations that makes their identification more challenging, both clinically and radiologically. On developing a long tenacious stalk, the subserosal leiomyoma may become a wandering or migrating leiomyoma. Occasionally such masses become adherent to the surrounding structures such as broad ligament or omentum or retroperitoneal connective tissue, where they receive auxiliary blood supply and lose their original attachment to the uterus. They are then called parasitic leiomyoma. On histological evaluation, they exhibit features similar to those of their uterine counterparts.

The location of tumors often determines the nature of the symptoms. In our case, the patient had a very long history of lower abdominal pain. Patients usually present with lower abdominal pain, mass per abdomen or pelvic mass. Para-ovarian leiomyoma can present as inguinal masses or acute abdomen. Bose et al have reported a case of calcified broad ligament fibroid. Rarely, pedunculated leiomyoma undergo torsion and present with acute abdomen. Giant fibroids are known to arise from the uterus, but occasionally from the broad ligament. Buckshee K et al reported an unusual and rare case of broad ligament leiomyoma with massive ascites and bilateral pleural effusion.

Ultrasoundographic features play an important role in diagnosis of parasitic and pedunculated leiomyoma. Since parasitic leiomyoma are separated from the uterus, they are easily mistaken for adnexal tumors such as ovarian tumors. In our case, the tumor was large and pedicle was very small and adherent to the broad ligament. We confirmed the diagnosis of this case on histopathology.

Conclusion

The diagnosis of broad ligament leiomyoma is difficult owing to its rarity, unusual presentation, clinical and radiological features. It is thus very important for the histopathologist to diagnose it unequivocally. We are reporting this case on account of its rarity and diagnostic difficulties.

Acknowledgments: None

Conflict of interest: None

References