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A Case of Large Broad Ligament Fibroid: Still A Diagnostic Dilemma

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Abstract

Introduction: The broad ligament leiomyoma is the most common extra uterine site for leiomyoma to occur.

Case Description: We are presenting a rare case of broad ligament fibroid in 37 years old P1L1A2 female with complaints of dyspepsia and heaviness in the abdomen with no menstrual complaints. Clinical examination revealed a 18 weeks size uterus with right forniceal fullness and no tenderness. Ultrasonography revealed anterior wall fibroid with peripheral vascularity.

Result: Laparoscopic myomectomy attempted revealed a broad ligament fibroid and intraoperative decision to do exploratory laparotomy with myomectomy was taken. Histopathologic examination confirmed the diagnosis of leiomyoma.

Conclusion: Owing to its rare nature and non-specific clinical presentations, broad ligament fibroid still poses a diagnostic dilemma and are often misdiagnosed as ovarian tumour or in our case uterine fibroid. Intraoperative findings and histopathological examination play a significant role in diagnosis and management.

Clinical significance: We present this case because of its rarity and diagnostic difficulty it posed.

Keywords: broad ligament fibroid, leiomyoma, laparotomy, myomectomy.

Introduction

Uterine fibroid or leiomyoma are the most common benign tumours of the uterus affecting 20-30% of females above 35years. Broad ligament leiomyoma is the most common extra uterine site, the incidence being <1% [1]. Owing to its rarity and non-specific clinical presentation, it can mimic ovarian tumours and uterine leiomyoma on radiological examination. This is one such case report where diagnosis of a uterine fibroid was made but intraoperatively a true broad ligament fibroid was discovered and later confirmed on histopathological examination.

Case description

A 37-year-old para 1 living 1 abortion 2 (previous all normal vaginal delivery), widow for 2 years came with

complaints of dyspepsia for 6 months and heaviness in the abdomen for 4 months. She had no history of bowel bladder complaints. She had no menstrual complaints. She had no significant past history of medical illness. Past surgical history comprised of emergency check curettage done in 2011 in view of incomplete abortion. General physical examination and vitals revealed no abnormalities. Abdominal examination revealed a large mobile mass in the lower abdomen whose lower border couldn't be ascertained. Pelvic examination revealed normal vulva and vagina with right forniceal fullness and pelvi-abdominal mass of 20 weeks size. Patients full blood count and serum biochemical investigations revealed no abnormalities. USG abdomen and pelvis revealed grade 1 fatty liver and 11.4cm x 9.0cm x 8.3 cm anterior wall fibroid with peripheral vascularity. A diagnosis of uterine leiomyoma was made, and patient was posted for laparoscopic myomectomy.

Intraoperatively a huge right sided broad ligament fibroid with normal uterus and normal appearing bilateral fallopian tubes and ovaries was noted and decision to do exploratory laparotomy with myomectomy sos total abdominal hysterectomy with opportunistic salpingectomy was taken. Right sided retroperitoneal dissection done with identification of the ureter, right sided uterine artery was lighted at origin and right sided round ligament was dissected. The plane of cleavage was identified, and the mass was enucleated after opening the leaves of broad ligament. Haemostasis was achieved in the bed of the myoma, and abdomen was closed after putting an intra-abdominal drain. Post operatively one pint whole blood was transfused to the patient and drain was removed on day 4 post-surgery. The patient was discharged to home on day 5. Patient was followed up for next 6 month in which she had no complaints. The histopathological examination confirmed the diagnosis of leiomyoma with no signs of any degenerative changes.

Discussion

The broad ligament is a bilateral fold of peritoneum connecting the uterus laterally to the pelvis lateral walls. The most common tumours of the broad ligament are epithelial. The most common mesenchymal tumour of the broad ligament is leiomyoma [2]. Broad ligament fibroids can be of two types - true or primary and false or secondary. Primary broad ligament fibroids are the ones that arise from the broad ligament itself whereas the secondary broad ligament fibroid arise from the uterus and laterally extend to the broad ligament while remaining attached to the uterine origin [2]. Another way to differentiate is that the uterine vessels and ureter lies medial to the primary broad ligament fibroid and vice versa. Clinically broad ligament fibroids can present with bladder bowel compressive symptoms which can range from pain during micturition, intermittency of flow of urination, increased frequency and even present with features ureteric obstruction. There can also be associated menstrual complaints if there is a coexisting uterine fibroid as well. Broad ligament fibroids can also be associated with pseudo-Meigs syndrome, and they can produce elevated cancer marker CA-125 levels, leading to diagnostic confusion with metastatic ovarian carcinoma.

The differential diagnosis of broad ligament leiomyoma is ovarian solid tumours, tube-ovarian masses, broad ligament cyst and lymphadenopathy [2]. Ultrasonography is mostly the first radiological investigation and rightly so as it can diagnose leiomyoma accurately as whorled appearance with variable echogenicity [3], and has a higher positive predictive value than MRI. Transvaginal ultrasound can help diagnose broad ligament fibroid. MRI with its multi-planar imaging capabilities is more

sensitive to ultrasound for detection of a broad ligament fibroid [3]. Not only does it help in differentiating broad ligament fibroid from solid ovarian or tubal tumours, it also helps to detect calcific, necrotic, hyaline and cystic degeneration in the fibroid. Superior sensitivity and minimal measurement discrepancies have rendered MRI as a more preferred diagnostic modality in fibroid assessment and clinical research. Histopathology still remains the gold standard for diagnosis.

Conclusion

Extra uterine fibroids though rare and mostly benign, can grow to a larger size over a short course of time [4]. The diagnosis of broad ligament fibroid comes with its own radiological and surgical challenges due to the rare occurrence, anatomy of its location and varied clinical manifestations. Broad ligament fibroids are mostly underreported radiologically. However, MRI is more superior to USG in terms of sensitivity. Histopathological examination gives a conclusive diagnosis. With extreme surgical expertise it is possible to properly manage such a case and avoid its recurrence.

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Abbreviations

MRI- magnetic resonance imaging

USG- ultrasonography