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Case Report

A Challenging case of Broad ligament fibroid

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ABSTRACT:
Leiomyomas are the most common benign tumours of female reproductive system which occur in women of child-bearing ages. Large fibroids are known to arise from uterus, but rarely from broad ligament. Broad ligament fibroids are rare extrauterine leiomyomas that arise within the folds of the broad ligament, often displacing the uterus and mimicking adnexal masses. Their location poses diagnostic challenges and can complicate surgical management. We report the case of a 37-year-old female, para 2 living 2, with a history of two previous lower segment cesarean sections and post-tubectomy status, who presented with complaints of lower abdominal pain radiating to the back and left flank. On clinical examination, the patient was vitally stable. Bimanual pelvic examination revealed an anteverted uterus corresponding to approximately 14 weeks' gestational size. Bilateral fornices were free, with no cervical motion tenderness, and no separately palpable adnexal mass. Transvaginal sonography (TVS) showed two well-defined solid masses arising from the bilateral broad ligaments, displacing the uterus centrally, and maintaining a clear plane from the uterine wall findings suggestive of bilateral broad ligament fibroids. Given the patient's completed family and persistent symptoms, a decision was made to proceed with total abdominal hysterectomy with bilateral salpingectomy (TAH with BS). Intraoperatively, two large fibroids were noted arising from the left and right broad ligaments, with the uterus displaced superiorly. Contrary to preoperative expectations, no adhesions were noted, and the surrounding pelvic anatomy was preserved. The procedure was carried out without complications, and estimated blood loss was minimal. Postoperative recovery was uneventful. Histopathological examination confirmed bilateral benign leiomyomas along with normal endometrium and fallopian tubes. This case highlights the rare presentation of bilateral broad ligament fibroids and reinforces the importance of thorough preoperative imaging, clinical correlation, and individualized surgical planning. TAH with BS is a definitive and effective treatment in symptomatic women with completed families, offering excellent outcomes even in anatomically complex fibroid locations.

Keywords: Broad ligament fibroid, Bilateral fibroids, Extrauterine leiomyoma, Transvaginal sonography, Total abdominal hysterectomy, Pelvic mass, Uterine fibroids, Gynecologic surgery

Case Presentation:

A 37-year-old female, para 2 living 2, with a history of two previous lower segment cesarean sections and post-tubectomy status, presented to the gynecology outpatient department with complaints of lower abdominal pain for the past four months. The pain was insidious in onset, dull in character, and radiated to the back and left flank. It was non-cyclic and not associated with urinary or gastrointestinal symptoms. Her menstrual cycles were regular, with no history of abnormal bleeding. She had no known medical or surgical comorbidities apart from the cesarean deliveries and tubal ligation.

On general examination, the patient was alert, oriented, and vitally stable. Systemic examination revealed no abnormalities. On abdominal examination, the abdomen was soft, non-tender (SFT) with no guarding or rigidity. A firm, midline pelvic mass was palpable, corresponding in size to a 14-week gravid uterus. On per speculum examination, the cervix and vaginal mucosa appeared healthy. Bimanual pelvic examination revealed an anteverted, uniformly enlarged uterus of approximately 14-week size. Bilateral fornices were free, and there was no cervical motion tenderness. No distinct adnexal mass was appreciable separately.

Transvaginal sonography (TVS) revealed two well-defined, solid hypoechoic masses located in the bilateral broad ligaments, displacing the uterus centrally. Both ovaries were visualized separately and appeared normal. A provisional diagnosis of bilateral broad ligament fibroids was made.

Given the patient's completed family, symptom severity, and sonographic findings, she was scheduled for total abdominal hysterectomy with bilateral salpingectomy (TAH with BS). Intraoperatively, bilateral broad ligament fibroids were confirmed, displacing the uterus upward and medially. No adhesions were noted despite the previous surgical history. The procedure was completed uneventfully, with minimal blood loss. Postoperative recovery was smooth. Histopathological examination confirmed benign leiomyomas, and both fallopian tubes we histologically unremarkable.

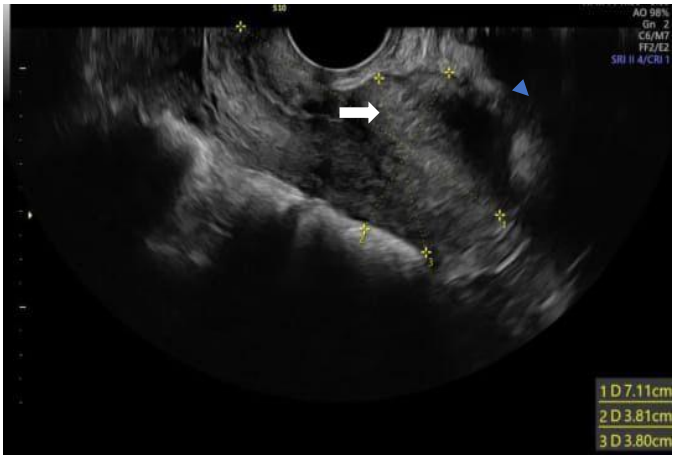

Image –i

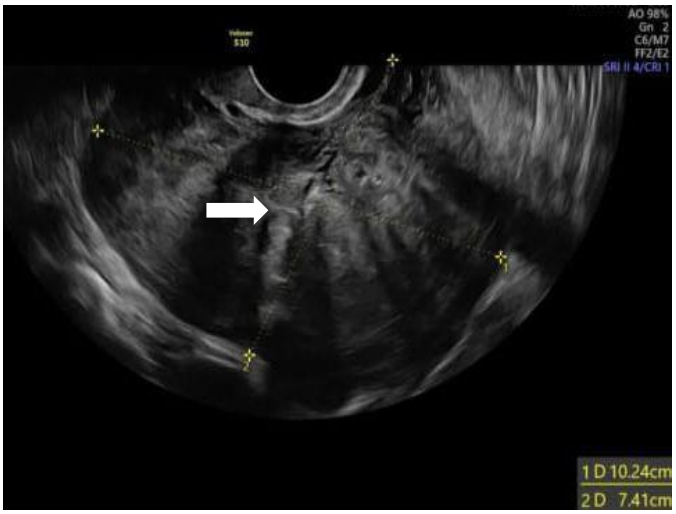

Image ii

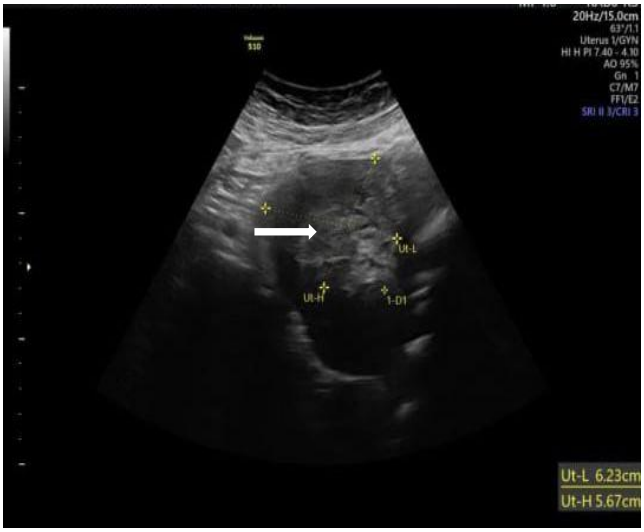

Image iii

Image i, ii,iii- showing bilateral broad ligament fibroid .The lesion shows heterogeneous echotexture with posterior acoustic shadowing. Ovaries are visualized separately from the mass and appear normal.

DISCUSSION:

Broad ligament fibroids represent a rare subset of extrauterine leiomyomas, comprising less than 1% of all uterine fibroids. They originate from smooth muscle fibers within the broad ligament and may either arise independently (true broad ligament fibroids) or extend from the lateral uterine wall into the broad ligament (false broad ligament fibroids) [1]. While unilateral broad ligament fibroids have been sporadically reported in the literature, bilateral presentation, as observed in this case, is exceptionally uncommon and rarely documented in indexed case reports.

Clinically, broad ligament fibroids often pose diagnostic challenges due to their anatomical location and nonspecific symptomatology. Patients may present with pelvic pain, pressure symptoms, menstrual irregularities, or an incidental pelvic mass. In the present case, the patient reported insidious-onset lower abdominal pain radiating to the back and left flank over a four-month period, without menstrual complaints. Such presentations may mimic adnexal pathology, including ovarian neoplasms or tubo-ovarian masses [2].

Imaging is pivotal in the preoperative assessment. Transvaginal sonography (TVS), while accessible and cost-effective, may be limited in characterizing the exact origin of pelvic masses when fibroids are located laterally or posteriorly. Magnetic resonance imaging (MRI) has been shown to offer superior soft tissue contrast and spatial resolution, aiding in accurate localization and differentiation from adnexal lesions [3,4]. In this case, however, the diagnosis was confidently established with TVS alone, based on the masses' location, vascular pattern, and their clear separation from the uterine contour. If TVS is

inconclusive , MRI pelvis should be done for confirmation .

Surgical management should be individualized based on the patient's age, fertility desires, and symptom burden. While myomectomy remains the procedure of choice for women desiring future fertility, total hysterectomy is considered definitive for those with completed families [5]. Our patient, with prior tubal ligation and persistent symptoms, was appropriately managed with total abdominal hysterectomy with bilateral salpingectomy (TAH with BS). Intraoperatively, bilateral broad ligament fibroids were confirmed, and notably, no pelvic adhesions were observed despite the history of two previous lower segment cesarean sections. This contradicts findings in some studies suggesting higher adhesion rates following multiple cesarean deliveries [6], highlighting the variability in postoperative pelvic anatomy.

Histopathological examination confirmed bilateral benign leiomyomas with no evidence of malignancy. Although rare, broad ligament leiomyosarcomas have been reported and must be excluded, particularly in cases involving rapid growth, postmenopausal status, or atypical imaging features [7].

This case is surgically challenging because of risk of high risk of ureteric injury and underscores the importance of considering broad ligament fibroids in the differential diagnosis of adnexal masses and chronic pelvic pain, especially in women with prior pelvic surgeries. Early and accurate diagnosis, supported by appropriate imaging and surgical planning, is essential for optimal patient outcomes. Bilateral involvement, although rare, should not be overlooked and must be managed with meticulous surgical technique to avoid injury to adjacent structures such as the ureter and iliac vessels.

CONCLUSION:

Broad ligament fibroids are rare, and bilateral involvement is exceptionally uncommon. Incidence rate of broad ligament fibroid is low1, less than 1% and so it is both clinical and radiological difficulty in making a diagnosis. (9)They may mimic adnexal masses and present with nonspecific symptoms, making diagnosis challenging. Imaging, particularly transvaginal sonography, is essential for preoperative evaluation and surgical planning. In this case, total abdominal hysterectomy with bilateral salpingectomy was successfully performed with no intraoperative complications. This case underscores the importance of considering broad ligament fibroids in the differential diagnosis of pelvic masses, especially in women with prior uterine surgeries.

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