**Case Report**

**Huge Broad Ligament Fibroid with Paracervical Extension: A Safe Approach by Same Setting Myomectomy before Hysterectomy**

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**Abstract**

The broad ligament is the most common extraterine site for leiomyoma but with low incidence rate. We present a patient with complaints of lower abdominal pain and abdominal distension. Abdominal examination revealed a huge firm mass arising from the pelvis corresponding to 24-week size. The cervix was deviated and elevated but felt separable of the mass. Ultrasonographic examination showed 20 cm fibroid beside the uterus suggesting broad ligament fibroid. On laparotomy, the uterus was elevated up and deviated laterally by the mass. A 20 cm broad ligament fibroid was seen extending deep in the pelvis and up filling all the broad ligament. Myomectomy was performed initially to decompress the mass for easy hysterectomy and carefully evaluating the ureter avoiding its injury. Total hysterectomy with bilateral salpingo-oophorectomy was done. This case was reported because of the rare incidence of broad ligament leiomyoma and the difficulty in its operative management.

**Keywords:** Broad ligament, fibroid, hysterectomy, myomectomy

**Introduction**

Leiomyoma is the most common tumor of the uterus.[1] Broad ligament is the most common extraterine site for the occurrence of leiomyoma;[2] the incidence is <1%.[3] Other extraterine sites are the round ligament, ovarian ligament, and the ovaries.[4] Leiomyoma in the broad ligament has been reported to reach a huge size which can mimic ovarian malignancy.[5]

These benign tumors in the broad ligament are usually asymptomatic, but if neglected and reached an enormous size, it results in chronic pelvic pain, compression of the bladder, and the bowel with dysfunction. It can lead to menstrual abnormalities with a coexisting intrauterine myoma.

This case was reported because of the rare incidence of broad ligament leiomyoma and the difficulty in its operative management.

**Case Report**

A 43-year-old multiparous female, G3P3, normal vaginal delivery, presented to our hospital with complaints of abdominal distension and abdominal pain with pelvic heaviness. There were no disturbances in the bladder and bowel function. There were no associated other symptoms. She was on an intrauterine device as a contraceptive method. General physical examination was free. Her vitals were free. Her abdomen was distended with a huge pelvi-abdominal mass of a pregnancy size of 20 weeks. The mass was nontender and firm. It has limited mobility from side to side. Pelvic examination revealed normal vulva and vagina. The cervix was drawn up and elevated but felt separable of the mass. Ultrasonographic examination showed 20 cm fibroid beside the uterus suggesting broad ligament fibroid. On laparotomy, the uterus was elevated up and deviated laterally by the mass. A 20 cm broad ligament fibroid was seen extending deep in the pelvis and up filling all the broad ligament. Myomectomy was performed initially to decompress the mass for easy hysterectomy and carefully evaluating the ureter avoiding its injury. Total hysterectomy with bilateral salpingo-oophorectomy was done. This case was reported because of the rare incidence of broad ligament leiomyoma and the difficulty in its operative management.

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20 cm in its widest diameter was seen. The uterus was pushed up and displaced to the left side. The mass was extending deep in the pelvis to the level of the ischial spine, occupying the pelvis with difficult delivering the uterus from the incision for hysterectomy. The round ligament stretched over the mass was incised by diathermy and extending the incision down to the capsule of the mass. The plane of cleavage was identified, and the mass was enucleated gently following the capsule taking care at the bed of the myoma avoiding injury to the ureter. Maintaining dissection of the myoma intracapsular, close to the myoma and avoiding pulling it out sharply preventing injury to the ureter. The mass was separable easily from the uterus with no blood supply from it, and it was mainly from pelvic vessels. Then, total hysterectomy with bilateral salpingo-oophorectomy was done. The bed of the myoma was oozing so, bilateral internal iliac artery ligation was done securing hemostasis [Figures 1 and 2]. The mass was sent for histopathology and was confirmed to be a fibroid. The patient discharged to home after 2 days.

**Discussion**

Broad ligament fibroid is a benign smooth muscle tumor which originates from the broad ligament hormone-sensitive smooth muscle or secondarily from the uterine smooth muscle. Extrauterine leiomyoma which commonly occurs in the broad ligament is usually asymptomatic. Broad ligament fibroid has the potential to grow to a very large size. If reached an enormous size, it can present with pressure symptoms of pelvic pain and bladder and bowel dysfunction.

The case presented here had both pressure symptoms of chronic lower abdominal pain and heaviness in the lower abdomen. Enlargement of the leiomyoma can cause upward displacement of the uterus, and it can become impacted in the pelvis leading to ureteric obstruction, urinary retention, and/or constipation.

Diagnosis of broad ligament fibroid are always a challenge. The most useful modalities for detecting extrauterine leiomyomas are ultrasonography, CT, and magnetic resonance imaging (MRI). Transvaginal ultrasound can diagnose broad ligament fibroid. MRI with its multiplanar imaging capabilities may be extremely useful for differentiating broad ligament fibroids from masses of ovarian or tubal origin and from broad ligament cysts.

The differential diagnosis for broad ligament fibroids includes pedunculated subserosal leiomyoma projecting towards the broad ligament, solid ovarian neoplasms: Particularly those with dominant fibrous components that tend to be inseparable from the ovary as ovarian fibroma or fibrothecoma and Brenner tumour, broad ligament cyst, and lymphadenopathy. Transvaginal ultrasound may be of help in diagnosing broad ligament fibroid because it allows clear visual separation of the uterus and ovaries from the mass. On pelvic ultrasound, it is usually seen as an hypoechoic, solid, well-circumscribed adnexal mass although that can be heterogeneous when large. There is generally no interface between tumor and uterus and no straight relation to the ipsilateral ovary with bridging vessels between the uterus and the mass if projecting sub serous fibroid and absent if broad ligament one.

Because of the location and size of broad ligament fibroids, surgery is challenging, especially since surrounding organs such as ureters, intestines, and urinary bladder may be at risk. It is very important that the ureteric course is identified during surgery.

**Conclusion**

We report broad ligament fibroid to emphasize the surgical complications they can pose. During surgery, one should be very careful about the ureteric course and surrounding
organs. Myomectomy can be done before hysterectomy to decompress the mass and facilitating surgery. Incision of the round ligament is essential to gain entry to the myoma. We should keep dissection in the plane of cleavage intracapsular avoiding ureteric injury. At the base of the myoma avoiding avulsion and traction of the myoma from its base. Securing hemostasis at the bed of the myoma can be done by simple sutting taking care of the ureteric course or bilateral internal iliac ligation as the source of blood supply of the myoma might not be obvious.

**Declaration of patient consent**
The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given her consent for images and other clinical information to be reported in the journal. The patient understands that names and initials will not be published and due efforts will be made to conceal identity, but anonymity cannot be guaranteed.

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**Conflicts of interest**
There are no conflicts of interest.

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