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Original Article

Laparoscopic Management of Broad-Ligament Fibroid

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ABSTRACT

BACKGROUND: Although Broad ligament fibroids are rare, their surgical management includes nuances of anatomical awareness, traction and counter-traction techniques, and proper hemostasis. **AIMS AND OBJECTIVES**-To provide an overview of the background, clinical presentation, and imaging related to broad ligament fibroid .;to discuss pertinent anatomical landmarks and demonstrating laparascopic myomectomy techniques in cases of broad ligament myomectomy technique. **MATERIALS AND METHODS**: Five cases of true broad ligament fibroids and 10 cases of false broad ligament fibroids were operated.3 of them misdiagnosed as intramural fibroids on USG and subserosal on CT SCAN. **RESULTS:** All were removed laparoscopically, with very minimal blood loss and without a need for blood transfusion. We traced the course of the ureters in all cases. No complications were encountered. **CONCLUSION**: The broad ligament fibroid even though being the rarest of extra-uterine tumours can grow to a large size as exemplified in these cases. Early diagnosis and laparascopy in experienced hands can decrease the peri and post-operative complications in such cases.

Key Words: *broad ligament fibroid; intramural fibroid; extrauterine tumors; laparascopy*

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INTRODUCTION

Uterine myomas are one of the most common benign tumors of female genital tract. Usually they arise from the different parts of the uterus according to which they may be classified as Subserosal, Intramural or Submucosal fibroid uterus.(1) But when their origin is confirmed from the Broad ligamental tissues it is called Broad ligament fibroid. The incidence of broad ligament myoma is <1%.

Broad ligament fibroids are of 2 types.:

True broad ligament fibroid - these spring from the muscle fibres normally found in the mesometrium.Such tumours may be in Round ligament,Utero-ovarian ligament or in the connective tissue of surrounding the ovarian and the uterine vessels.

False/Pseudo broad ligament fibroid : originate mostly from the lateral wall of the uterus or cervix and invades the broad ligament tissue.(2)

Moreover broad ligament tumour pose specific diagnostic difficulties because of there rarity causing an error in final diagnosis and therefore management.

AIMS AND OBJECTIVES:

1.To provide an overview of the background, clinical presentation, and imaging related to broad ligament fibroid.
2.To discuss pertinent anatomical landmarks in clinical cases of huge broad ligament fibroid.
3.Demonstrating lap myomectomy techniques in such cases and discussing key points of successful and safe surgical management .

MATERIALS AND METHODS

Females of reproductive age group presented to us with c/o lump abdomen progressively increasing in size .They had huge size lump abdomen ;2 of them reaching upto xhiphysternum. Patients had regular menstrual cycles but with heavy flow and dysmenorrhea ;not responding to any medical treatment. Five cases of true broad ligament fibroids and 10 cases of false broad ligament fibroids were operated.3 of them misdiagnosed as intramural fibroids on USG and subserosal on CT SCAN Myomectomies were planned in above all patients with symptoms of chronic pelvic pain,

menorrhagia; infertility and pressure symptoms. The patients were investigated with a complete hemogram, blood grouping, and cross matching, renal function tests; liver function tests; thyroid function tests; prothrombin time; chest-Xray and ECG as also a pelvic ultrasound (both transabdominal (*TAS*) and transvaginal (*TVS*);CT/MRI to figure out the exact number, size, and location of the fibroid. Intravenous urography is also necessary to look for any displacement or obstruction to the ureter. All laparoscopic myomectomies were performed under combined anaesthesia. A standard three-port laparoscopy was performed. Intra operative measures were taken to reduce complications. Vasopressin was routinely injected into the broad ligament fibroid to reduce intraoperative bleeding .Depending on the location of the fibroid in relation to the uterine vessels and the ureter, an incision was made on the anterior or posterior leaf of the broad ligament. With the help of harmonic scalpel broad ligament myoma was then enucleated out. Course of ureter identified and secured. Care was taken to minimise the risk of thermal injury to surrounding structures, particularly the uterine vessels and ureter. Following fibroid enucleation, the area was washed to observe haemostasis. Myoma bed obliterated by haemostatic baseball suturing. Myoma tissue retrieved out with endobag morcellation. No subsequent complications were reported.

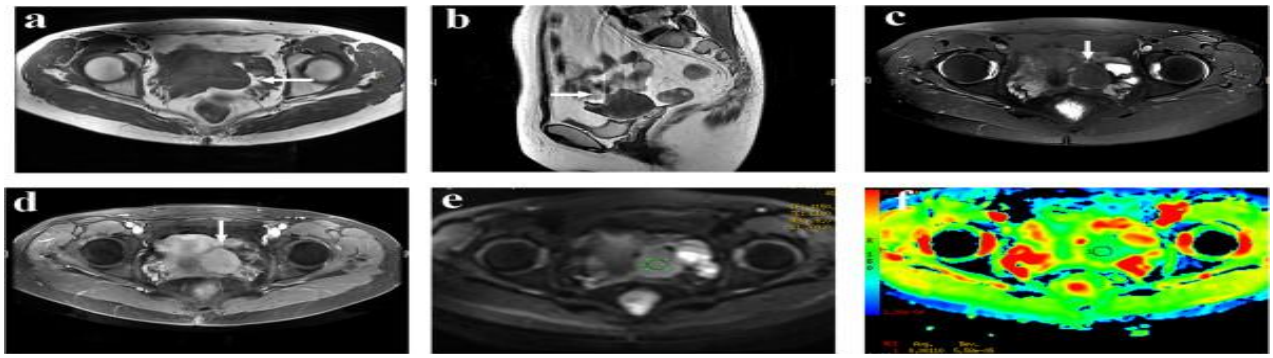


FIGURE 1- IMAGING IN CASES OF TRUE BROAD LIAGAMENT FIBROID

RESULTS

We have operated on 5 cases of true broad ligament fibroids and 10 cases of false broad ligament fibroids. All were removed through the laparoscopic route, with very minimal blood loss and without a need for blood transfusion. We traced the course of the ureters in all cases. No complications were met with.

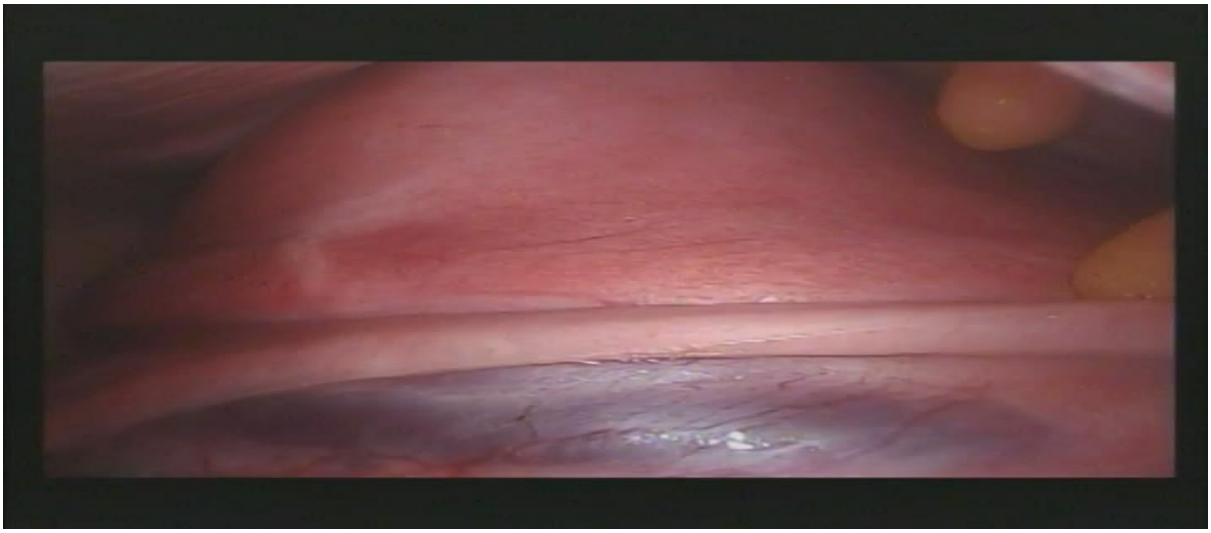


FIGURE 2-IDENTIFICATION OF TRUE BROAD LIGAMENT FIBROID ON LAPARASCOPY

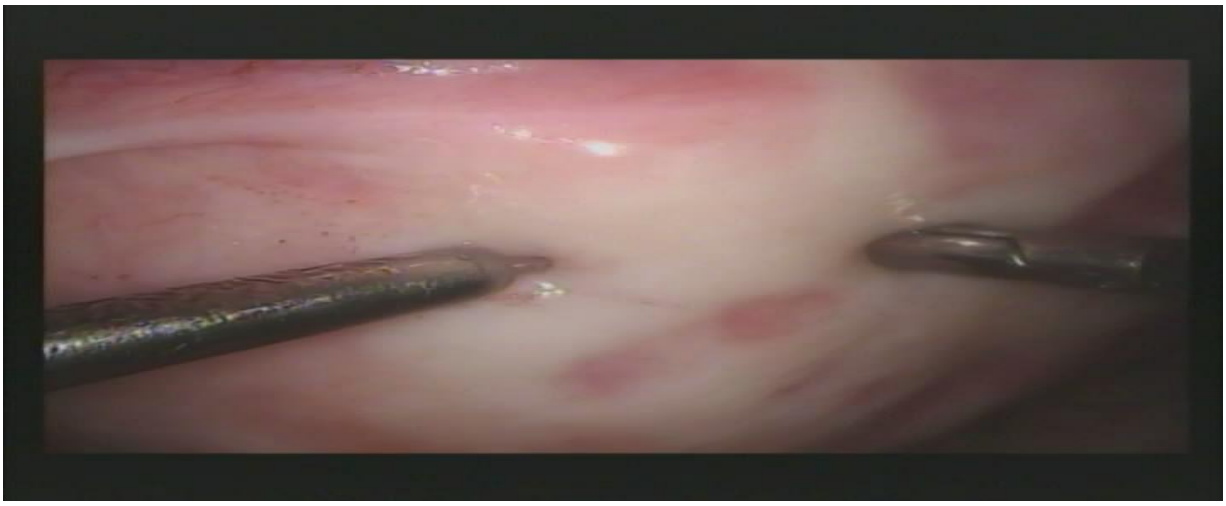


FIGURE 3-VASOPRESSIN INJECTION INTO THE FIBROID

FIGURE 4-TRANSVERSE INCISION OVER THE MYOMA

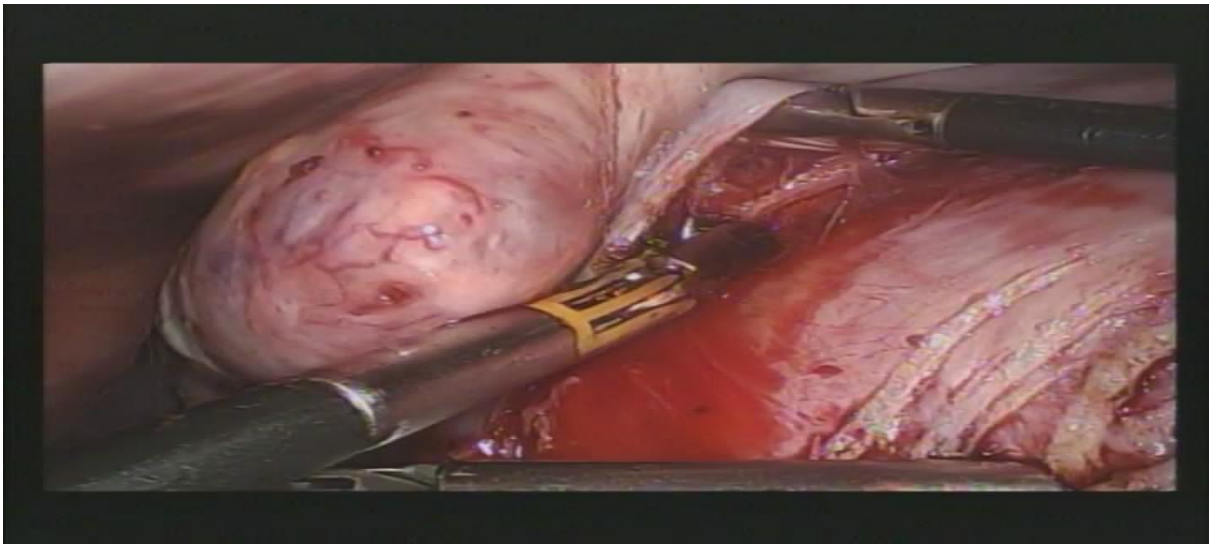


FIGURE 5-MYOMA TISSUE ENUCLEATED

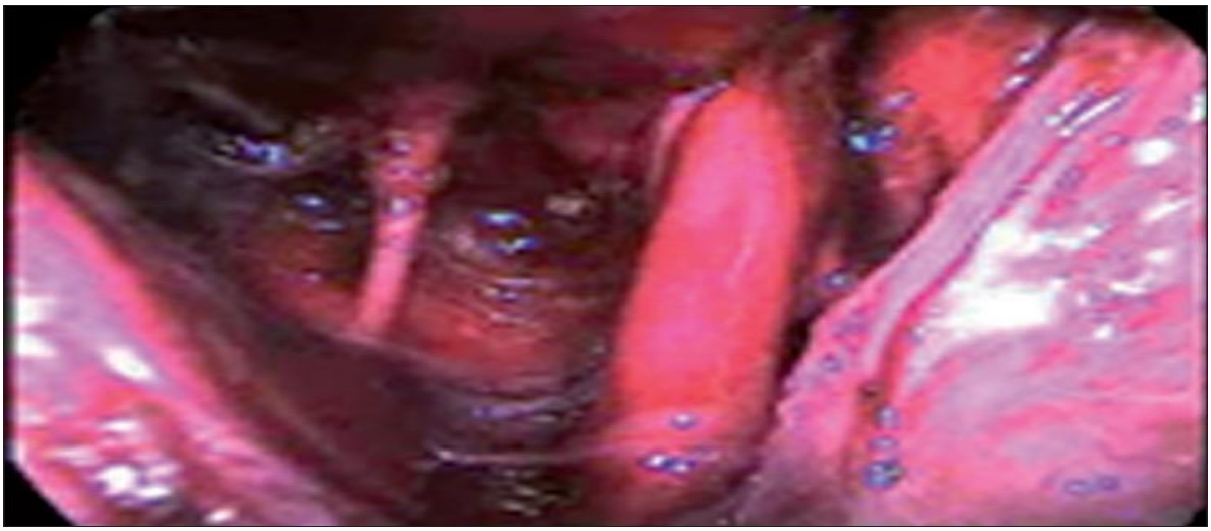


FIGURE 6-COURSE OF URETER IDENTIFIED

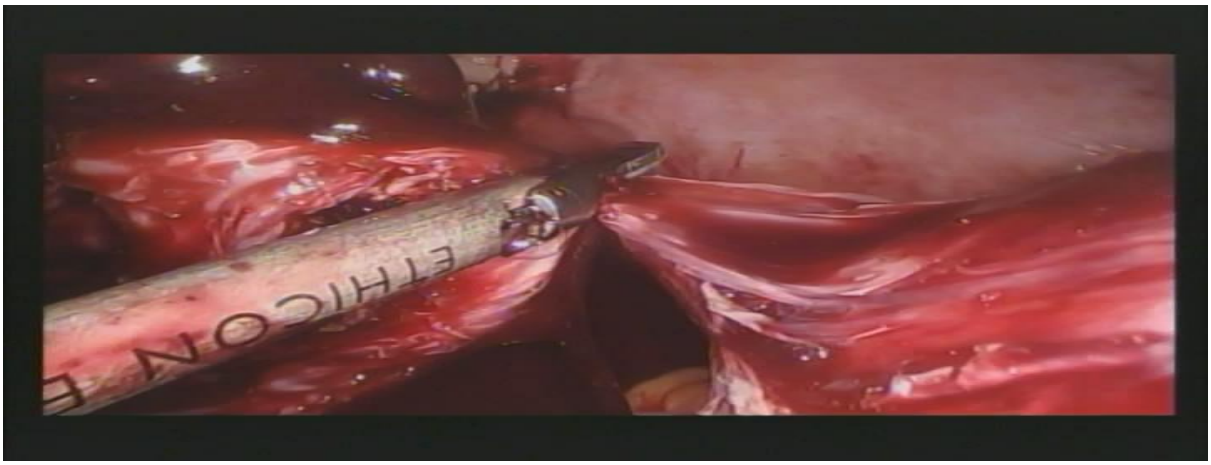


FIGURE 7-COURSE OF URETER IDENTIFIED

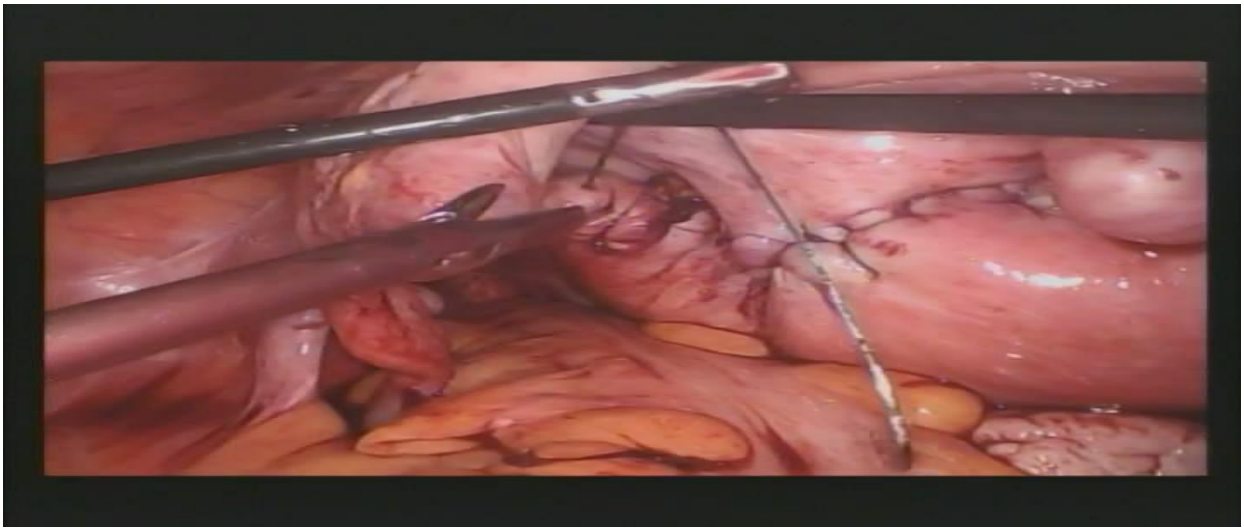


FIGURE 8-MYOMA BED REPAIR BY BASEBALL SUTURING

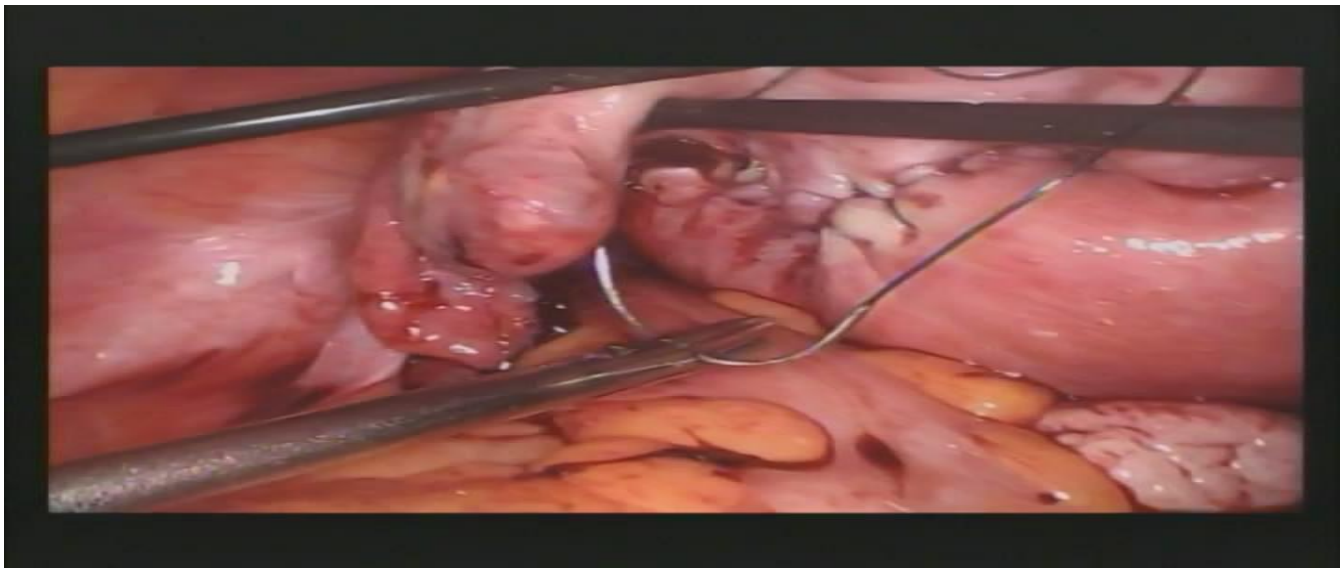
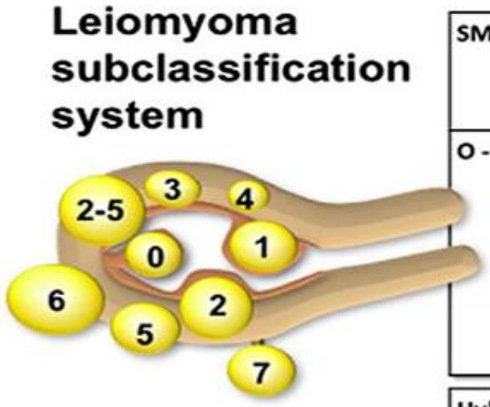


FIGURE 9-MYOMA BED REPAIR BY BASEBALL SUTURING

DISCUSSION

Uterine fibroids are commonly intramural, subserosal or submucosal. Less frequently subserosal or pedunculated fibroid may extend into peritoneal fold of the broad ligament to form an intraligamentous fibroid.

FIGO Classification of fibroid :(3)



SM - Submucosal	0	Pedunculated intracavitary
	1	<50% intramural
	2	≥50% intramural
O - Other	3	Contacts endometrium; 100% intramural
	4	Intramural
	5	Subserosal ≥50% intramural
	6	Subserosal <50% intramural
	7	Subserosal pedunculated
	8	Other (specify e.g. cervical, parasitic)

Hybrid leiomyomas (impact both endometrium and serosa)	Two numbers are listed separated by a hyphen. By convention, the first refers to the relationship with the endometrium while the second refers to the relationship to the serosa. One example is below	
	2-5	Submucosal and subserosal, each with less than half the diameter in the endometrial and peritoneal cavities, respectively.

FIGURE-10

These benign tumours in the broad ligaments are usually asymptomatic but if neglected and reach an enormous size, 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.(4)

These broad ligament fibroids are of clinical surgical importance. Although broad ligament fibroids are rare ,their surgical management includes nuances of anatomical awareness, traction and counter-traction techniques and proper haemostasis. Broad ligament fibroids can pose various surgical complications and henceforth during surgery one should be very careful about ureteric course and surrounding structures .One should keep the dissection in the plane of cleavage; intracapsular avoiding ureteric injury and at the base of myoma avoiding avulsion by traction from the base. Securing haemostasis at the bed of myoma can be done by simple baseball suturing.(5)

CONCLUSION

Laparascopic myomectomy in huge broad ligament fibroids with expert hands can help young and infertile patients to preserve their reproductive potential. It helps patients have a faster recovery, shorter hospital stay, and less morbidity. Accurate preoperative planning , proper diagnosis and skillful sugery can help in achieving the goal.

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