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Fibroid Uterus – Touch Me Not

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Introduction

Myoma is a benign tumor which is very commonly encountered in women mostly belonging to reproductive age. A tumor in the pelvis is often a disturbing perception for the patient and gives rise to concern. The professional advice regarding this abnormal growth has to be very cautiously pronounced. Before coming to any conclusion regarding the final decision, one has to take into consideration whether this growth is at all harmful to the patient and needs any surgical intervention.

In the past, gynecologists were tempted to adopt a path of least resistance and without any proper evaluation, recommended surgical intervention. It is well known that fibroid is a benign growth, usually slow growing, and does not give rise to any particular pathological sequalae except under very few occasions. Moreover, the recommendation for surgical intervention was based on arguments which did not stand close scrutiny. Often surgery was unnecessarily recommended for this mostly harmless condition.

Recently, all these arguments and rationale advanced to justify surgical intervention for myoma have been challenged and there has been a shift in the opinion of the gynecologists with regards to the indication for surgical intervention. Currently, surgical intervention is advised only for very few specific symptoms and as far as possible non-surgical approach for management of leiomyoma is recommended. However, the traditional management decision of the past requires some hard look for validation of the previous concepts and for arguments justifying surgical intervention viz., myomectomy and hysterectomy. Some of the arguments in favor of surgical intervention need scrutiny.

Inability to assess ovaries

This argument justifying surgical intervention is no longer valid as a thorough bimanual examination supported by ultrasonography will provide the gynecologist with an image of the internal structure size of the fibroid and evaluation of the ovaries[1]. Therefore hysterectomy or myomectomy for inadequate pelvic examination is no longer acceptable.

The purpose of ovarian assessment in the past was to detect any enlargement and neoplastic change. Today various technological and biochemical procedures like tumor markers and high resolution ultrasonography can help diagnosing ovarian cancer without having to undertake surgery.

Lastly, the procedure of hysterectomy or myomectomy for early detection of ovarian cancer is not justified as myoma is usually seen during reproductive age whereas ovarian cancer is common at a later age.

Inability to rule out malignancy in fibroid

The uterine size is a poor predictor of malignancy and evaluation of other clinical features and diagnostic tests should precede surgical intervention. The endometrial carcinoma is one of the common uterine malignancies and is a disorder of postmenopausal women. The uterine size may be small. Irregular vaginal bleeding in postmenopausal state further confirms the suspiction and histopathology of the endometrial curettage would clinch the diagnosis.

Sometimes the rapid enlargement of the tumor may raise the suspician of leomyosarcoma. A high resolution ultrasound may further confirm the diagnosis.

The concern regarding the development of cancer leads to early surgical intervention. However, with the help of high resolution ultrasonography, the structure and origin of pelvic mass can be determined. This differentiates the neoplasm from uterine malignancy. In case of uterine malignancy the enlargement of uterus is commonly due to benign myoma. A common clinical observation is that the uterus becomes small in menopause. Instead, if the uterus keeps on enlarging, it will raise a suspicion of malignancy and under this special condition a surgical intervention may be acceptable.

Increased surgical risk caused by an enlarging uterus

The concern of increased surgical risk is a relative one and depends primarily on the skill of the operator and availability of resources in the institution. A retrospective study of 93 hysterectomies performed women with myomas revealed no difference in term

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estimated blood loss as compared to hysterectomy for other indications.

Compromise of fertility by myomectomy

Fertility may be significantly jeopardized by adhesions following myomectomy[2]. Some investigators have reported lower conception rates after myomectomies done for women with uterine fibroid of more than 10 weeks gestational size[2]. Other investigators have not found any correlation of fertility with the size of the tumour removed[3,4].

Effect of postmenopausal hormone therapy on myoma

Normally uterine size decreases appreciably in menopause. This is because of withdrawal of supporting estrogens. Common apprehension of increase in uterine size due to hormone therapy has not found much favor because of lack of evidence.

Myomy and fertility

Leomyomas are commonly associated with infertility and considered to be the sole cause of infertility in a small percentage of patients[5]. In one review of myomectomies performed for all indications history of infertility was recorded in 27% of women[6]. Another study calculated a 10% rate of pregnancy complications like pregnancy loss due to leiomyomas[7]. Although leiomyomas are supposed to increase in size during pregnancy, no demonstrable change in size based on serial ultrasonographic examination was noted in 70 to 80% of patients[8,9]. The risk of complications is influenced by myoma location and size[10].

Some authors are of the view that the size of myoma correlates with fertility. This impression may be rather simplistic as there certainly is a need for carefully controlled trial comprising of premyomectomy conception rates with postmyomectomy conception rates. The issue of leiomyoma responsible for infertility has not been finally settled. Therefore, a myomectomy undertaken for improving the fertility may not be a sound evidence based medical practice. Another important issue which needs to be addressed is that the post-myomectomy adhesions may adversely affect the chances of conception.

Risk of surgery for myomas

The primary risk of surgery for myomas is the morbidity and very rarely the mortality following hysterectomy for myomas. As against that, when death from pregnancy or cancer related hysterectomies is compared it shows that the death rate from hysterectomy is 5-6 per 10,000 operations[11]. It is a estimated that more than 300 deaths occur annually in the United States following hysterectomy for benign conditions[12].

As far as the morbidity is concerned, several reports indicate that morbidity is 2 to 50% in patients submitted to surgery[13,14]. The largest category of febrile morbidity includes respiratory, urinary and wound infections. Dicker et al[13] found febrile morbidity rates of 15% in vaginal hysterectomy and 32% in abdominal hysterectomy. Transfusion rates for hysterectomies performed in nine institutions between 1978 and 1981 ranged between 8% and 15%[15]. Similarly a review of 499 hysterectomies performed for benign indications in 1990 at Brigham and Women's Hospital reported a 10% blood transusion rate[15].

Other rare major morbidities include damage to adjacent organs and life threatening sequelae like pulmonary embolus. Bladder injury as reported in the literature shows the figures of 0.3 to 0.8% for ureteral injury, 0.1 to 0.5% for bowel injury and 0.2 to 0.3% for pulmonary embolus[16].

Growth of the uterus and myomas caused by post menopausal hormone replacement therapy (HRT)

The effect of HRT on myoma is full of controversies. The GnRh analogues used for reduction of the myoma size raised the possibility of increase in uterine size after institution of HRT. But it has been found that the increase in size of the fibroid after HRT following GnRh with add back therapy may be negligible and temporary. After stopping the HRT there is hardly an appreciable decrease in the size of myoma.

Critical evaluation of surgical intervention for myoma

Recent concensus as summarized by Hillard[17] states that asymptomatic myomas do not usually require surgery. The following indications for surgery are universally stated :

1. Abnormal uterine bleeding with resultant anemia, non-responsive to hormonal management.
2. Chronic pain with severe dysmenorrhea, dyspareunia or lower abdominal pressure.
3. Acute pain as in torsion of a pedunculated leiomyoma or in a prolapsing sumbucosal fibroid.
4. Urinary symptoms or signs such as hydronephrosis due to pressure effect on ureter.
5. Infertility where leiomyomas are the only abnormal finding.
6. Markedly enlarged uterine size with compression symptoms or discomfort.

Thus, once again, the final opinion regarding surgical intervention is very categorically stated and if these indications are not present surgery should be avoided as far as possible. As regards sarcoma developing in a

fibroid, the absolute risk is reported to be less than 2-3 per 1000[17]. In other words, international opinion indicates that uterine sarcoma is no more common in women with rapid uterine growth than without. However, the rapid enlargement is well defined by serial ultrasonic measurement. This is otherwise not possible due to variations in the subjective interpretation of the size by different clinicians.

Hysterectomy has long been viewed as definitive management of symptomatic leiomyoma. Even if myomectomy is undertaken in preference to hysterectomy, considering the young subjects who desire child bearing, it needs to be kept in mind that risks of myomectomy include the risk of hemorrhage and transfusion requirement.

Laparoscopic myomectomy

Laparoscopic myomectomy has been recently practiced by experts in endoscopic surgery. It is important to remember that large fibroids may be difficult to remove through a small incision, unless morcellation is resorted and this needs skill. Hysteroscopic resection of small submucous leiomyomas is a technique that may offer benefits for a select group of patients. The recurrence risk of leiomyomas has been reported to be as high as 50% after myomectomy, with up to one third requiring repeat surgery[7,13].

Laparoscopic myomectomy is indicated for the standard indications for myomectomy. A comparison of abdominal myomectomy with laparoscopic procedure indicates higher recurrence rate after laparoscopic myomectomy as the procedure may miss out small myomas. But at one point laparoscopic myomectomy scores much higher when compared to open myomectomy. This is about dense adhesions following abdominal myomectomy. With laparoscopic myomectomy, morbidity is considerably less. But there may be other problems like longer anesthesia, hemorrhage and rupture of the myomectomy scars in future pregnancy besides usual complications of laparsocopic surgery.

Myolysis and uterine embolisation

There are other innovative procedures now available viz., myolysis and uterine embolization. Myolysis involves the use of laser or needle electrodes to coagulate individual leiomyomas[18]. These newer technics are yet to be evaluated with long term follow up.

Summary and Conclusion

After documentation of the above mentioned facts related to surgical intervention of myomas very little supportive evidence is available to justify routine myomectomy. In the final analysis, unless, very disabling and serious indications arise, the myomas should better be left alone.

References

1. Rodriguez MH, Platt LD, Medearts AL et al. The use of transvaginal sonography for evaluation o postmenopausal ovarian size and morphology. *Am J Obstet Gynecol 1988; 159:810-4.*
2. Buttram VC Jr, Reiter RC. Uterine Leiomyomata – Etiology, Symptomatology and Management. *Fertil Steril 1981;56:433-45.*
3. Rosenfeld DL. Abdominal myomectomy for otherwise unexplained infertility. *Fertil Steril 1986;46:325-30.*
4. Smith DC, Uhlir JK. Myomectomy as a reproductive procedure. *Am J Obstet Gynecol 1990;162:1476-82.*
5. Lumsden ME, Wallage EM. Clinical presentation of uterine fibroids. *Baillieres Clin Obstet Gynecol 1998;12:177-95.*
6. Buttram VC, Reiter RC. Uterine Leiomyomata: Etiology, Symptomatology and Management. *Fertil Steril 1981;36:433-45.*
7. Katz VL; Doiters DJ, Drogemeuller W. Complications of uterine Leiomyomas in Pregnancy. *Obstet Gynecol 1989;73:593-6.*
8. Rosati P, Exacoustos C, Mancuso S. Longitudinal evaluation of uterine myoma growth during pregnancy. A sonographic Study. *J Ultrasound Med 1992;11:511-5.*
9. Aharoni A, Reiter A, Goland D et al. Patterns of growth of uterine Leiomyomas during pregnancy. A prospective Longitudinal study. *Br J Obstet Gynecol 1988;95:510-3.*
10. Vergani P, Ghidini A, Strobelt N et al. Do uterine leiomyomas influence pregnancy outcome? *Am. J Perinatol 1994;41:356-8.*
11. Loft A, Andersen TF, Bronnum – Hansen H et al. Early postoperative mortality following hysterectomy, A Danish population based study, 1977-1981. *Br J Obstet Gynecol 1991;98:147-54.*
12. Wingo PA, Huezo CM, Rubin GL et al. The mortality risk associated with hysterectomy. *Am J Obstet Gynecol 1985;152:803-8.*
13. Dicker RC, Greenspan JR, Strauss LT et al. Complications of abdominal and vaginal hysterectomy among women of reproductive age in the United States. *Am J Obstet Gynecol 1982;144:842-8.*
14. Bachmann GA. Hysterectomy : A Clinical Review. *J Reprod Med 1990;35:837-62.*
15. Friedman AJ, Haas ST. Should uterine size be an indication for surgical intervention in women with myomas. *Am J Obstet Gynecol 1993;168:751-5.*
16. Paula J, Hillard A. Benign diseases of the female reproductive tract : symptoms and signs. In Novak's gynecology. 13th edition. *Philadelphia. Lippincott.2002:351-420.*
17. Fedele L, Parazzin F, Lughini L et al. Recurrence of fibroids after myomectomy : A transvaginal ultrasonographic study. *Hum reprod 1995;10:1795-6.*
18. Phillips DR, Millim SJ, Nathanson HG et al. Experience with laparoscopic leiomyoma coagulation and concomitant operative hysteroscopy. *J Am Assoc Gynecol Laparosc 1997;4:425-33.*