

Recurrent Fibroids

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OBJECTIVE – To study the problem of recurrent fibroids. **METHODS** – Twelve patients of recurrent fibroids seen over a 12 year period from 1991-2002 were analysed. **RESULTS** – Of the 12 patients, three underwent hysterectomy, one is under treatment with GnRH analogues and one continues to have recurrent fibroids. Three patients have conceived with recurrent fibroids and two have delivered. Their fibroids are not growing. Five patients did not conceive. **CONCLUSION** – Careful evaluation and individualization of treatment is necessary in tackling this challenging problem.

Key words : recurrent fibroids, myomectomy

Introduction

Uterine myomas are the most common pelvic tumors in women. Once treated they are notorious for recurring. Clinical studies have reported a recurrence rate of 5% to 40%. Malone¹ followed up 125 cases over a period of 5-10 years and noted a recurrence rate of 47%. This wide range seems to be because of discrepancies in long term follow-up and different criteria used in diagnosis². Significant factors for nonrecurrence seem to be occurrence of term pregnancies after treatment, number of myomas removed and the period of observation; not significant ones seem to be the age of the patient at myomectomy and the site of myomas³.

Candiani et al⁴ did a study on the 10 years probability of recurrence. They showed that women who gave birth to a child after myomectomy had a 10 year recurrence rate of 15% against 30% for those who did not. Incidence of recurrence was more if two or more fibroids had been removed.

Methods

We came across 12 cases of recurrent fibroids after myomectomy. They were evaluated clinically and by pelvic sonography, appropriately treated and followed up from 1991 to 2002.

Results

Out of the 12 patients, three were unmarried girls, of whom one got married later on and conceived. Three were married but did not want to conceive. In these six

cases the apparent cause of recurrence was the lack of pregnancy. Of the other two unmarried girls, one is 35 years old and is under treatment with GnRh analogues, and the other is 42 years of age and has opted for hysterectomy. Of the three others who did not want to become pregnant, two underwent hysterectomy; one at the age of 42 and the other at the age of 43. One patient continues with recurrent asymptomatic fibroids since she is approaching menopause. Out of the remaining six cases who were trying to conceive, two conceived and delivered by cesarean section at term. In them recurrence was confirmed at surgery. After delivery; the fibroids are not growing and patients are asymptomatic and under observation. The other four patients did not conceive despite the routine treatment for infertility. They were not willing for IVF-ET. Fibroids recurred in them and caused symptoms. By this time they had passed 40 years of age. They were submitted to hysterectomy (Table I).

Discussion

Fibroids or myomas are smooth muscle tumors; benign in nature and closely related to anovulation and persistent high estrogen levels and hence associated with infertility. Current research indicates that each tumor results from a single progenator smooth muscle cell, which undergoes somatic mutation. Subsequent growth occurs by clonal expansion of the mutated myocyte.

Besides genetic predisposition and ovarian hormones that play a role in tumor expansion, a large number of growth factors have been identified that cause tumor expansion viz., IGF (insulin like growth factor), EGF (epidermal growth factor) and PDGF (platelet - derived growth factor). TGF β (transforming growth factor β), and BFGF (basic fibroblast growth factor).

Chromosome 3, 6, 7, 10, 12 and 14 are also involved. Our knowledge of whether fibroids are the cause or the

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Table I. Details of cases of recurrent fibroid

Sr. No.	Age at initial visit	Parity	No. of fibroids	GnRh used / not used	Surgery at myomectomy	Advice following myomectomy	Time taken for recurrence	Conceived or not	Treatment after recurrence	Followup period after recurrence
1.	25	0	4	Not used	4 fibroids and large ovarian cyst removed	To conceive soon	2 years	Conceived in 3rd year after myomectomy	Successful term pregnancy; LSCS done; multiple fibroid noted	5 years asymptomatic with multiple fibroids
2	33	0	1 large fibroid with	Not used	1 fibroid removed	To conceive but not interested	2 years	Not conceived	Under observation; menopause	9 years with 2 fibroids
3	36	0	3	Not used	3 fibroids removed	To conceive	8 years	Not conceived	GnRh analogue followed by hysterectomy	11 years
4	33	1	3 fibroid with endometriosis	Used	3 fibroids removed	To conceive	1 years	Not conceived	GnRh analogue followed by hysterectomy	3 years
5	30	0	4	Not used	4 fibroids removed	To conceive	4 years	Not conceived	Hysterectomy	9 years
6	28	1	1	Not used	1 fibroid removed	To conceive	5 years	Conceived	3 unwanted pregnancies voluntarily terminated (MTP) followed by 1 successful term pregnancy, LSCS done	8 years asymptomatic with 2 fibroids
7	29	0	12	Not used	12 fibroids removed	To get married and conceive	1 year; at repeat myomectomy 4 fibroids	Not married	GnRh analogue; depoprovera and danazole used	9 years; multiple fibroids; married and conceived in 9th year
8.	33	0	1 fibroid chocolate cyst	Not used	1 fibroid removed with chocolate cyst	To conceive	8 months	Not conceived	GnRh analogue followed by hysterectomy	8 years
9.	26	0	3	Not used	3 fibroids removed	To conceive, but not interested	2 years	Conceived	3 unwanted pregnancies voluntarily terminated (MTP)	7 years
10	38	0	1	Not used	1 fibroid removed	To get married and conceive	4 years	Not conceived	Hysterectomy done	8 years
11	25	0	2	Not used	2 fibroids removed	To conceive, but not interested	4 years	Not conceived	Asymptomatic under observation	10 years, 1 fibroid
12.	30	0	3 fibroids with endometriosis	Used	3 fibroids removed with chocolate cyst	To get married and conceive	2 years	Not conceived	GnRh analogue used	5 years; multiple fibroids growing

result of infertility still remains debatable.

The recurrence of fibroid is a great trauma and tragedy to the patient. It is a big challenge for the gynecologist to prevent and treat it. Careful evaluation and individualization of the treatment is necessary^{5,7}. Some would need counseling and ART, while others would benefit from specialized forms of therapy⁸.

Pretreatment with GnRh analogues

GnRh analogues decrease uterine muscle size and number and hence fibroid size. There is a 50% reduction in fibroid size with GnRH analogues⁹. It also causes a reduction in blood flow and hence less blood loss during surgery. The disadvantage is its cost and the fact that the fibroids regrow within 2-3 months of stopping treatment. Besides it causes vasomotor symptoms and bone loss. In our cases, GnRH analogues were used to our advantage. In many cases, which would have required vertical incision, we were able to do the surgery by transverse incision and blood transfusion was avoided. One has to weigh the pros and cons before starting treatment with GnRH analogues

Pretreatment with GnRH analogues did not affect the recurrence rate nor the myoma related symptoms¹⁰. Study done by Friedman et al¹¹ found that the critical factor seems to be the number of myomas seen initially. If it was less than three, then the chance of recurrence was two in eight patients, while if more than three, then recurrence was nine in ten patients.

Newer methods of treatment

These are myolysis, cryomyolysis, gene therapy and uterine artery embolization. Myolysis can be done by laparoscopy or hysteroscopy. Nd:YAG laser or unipolar or bipolar cautery can be used as energy source. It results in 90% shrinkage in volume. The disadvantage is that the uterus can rupture during pregnancy after myolysis, so it is advocated only for patients not wanting conception^{12,13}. Zreik et al¹⁴, performed laparoscopic cryomyolysis in 14 cases. Pretreatment with GnRH analogues was done for two months. This is a freezing technique using the CMS acuprobe system. Liquid nitrogen is used; the fibroid is turned into an iceball. A second look laparoscopy is done later. Symptomwise the results are good. There was recurrence in one case. MRI studies done after GnRh analogues and repeated 4 months after cryomyolysis showed an increase in uterine size by 40% which is consistent with the reversal of GnRh analogue effect. However, myoma volume decreased by 6% and reversal patients showed a decrease of over 50%. Thus, it appears that reduction in myoma size by GnRh analogues can be prolonged or

even enhanced by cryomyolysis despite return to pretreatment size of normal uterine tissue. Satisfactory response was seen in 22%. There was no complication in any case. But minimal adhesions were seen in two cases and dense adhesions in two cases¹⁴.

In uterine artery embolization, polyvinyl particles are injected into the uterine artery to block the blood flow. The fibroids shrink and die. This procedure needs angiography facility. A pelvic arteriogram is first done. The advantages of this procedure is that 85% to 90% improvement is noted. Fibroids of 13 cm have shrunk in 6 months time. There was no recurrence observed. No adhesions were formed. Besides, all types of fibroids can be treated with this. Disadvantages are that pain may persist up to 4-6 months, 1% to 2% need immediate hysterectomy for infarction or infection and premature ovarian failure is seen in 1% of the cases. Though there are pregnancies reported after this procedure, long-term experience is lacking. We do not have any experience of uterine artery embolization.

Because of the changing social norms like late marriage, late pregnancy and small family size, we find that the incidence of fibroids and consequently their recurrence are on the rise.

All those patients of fibroids of the uterus who undergo myomectomy are strongly advised to conceive early either naturally or by IVF-ET, as this seems to be the only factor that slows down the occurrence of recurrence. This problem of recurrent fibroids seems to be coming under the control of the gynecologist, thanks to the new modalities of treatment. All these new modalities however need more research and clinical evaluation.

References

1. Malone LG. Myomectomy: recurrence after removal of solitary and multiple myomas. *Obstet Gynecol* 1969;34:200-3.
2. Stewart EA, Faur AV, Wise LA. Predictors of subsequent surgery for uterine leiomyomata after abdominal myomectomy. *Obstet Gynecol* 2002;90:426-32.
3. Roth TM, Gustilo-Ashby T, Barber MD. Effects of race and clinical factors on short-term outcomes of abdominal myomectomy. *Obstet Gynecol* 2003;101:881-4.
4. Candiani GB, Fedele L, Parazzini F. Risk of recurrence after myomectomy *Br J Obstet Gynecol*. 1991;98:385-9.
5. Parker WH, Rodi IA. Patient selection for laparoscopic myomectomy *J Am Assoc Gynecol*

- Laparosc* 1994;2:23-6.
6. Doridot V, Dubuisson JB, Chapron C. Recurrence of leiomyomata after laparoscopic myomectomy. *J Am Assoc Gynecol Laparosc* 2001;8:495-500.
 7. Nezhat FR, Roemisch M, Nezhat CH. Recurrence rate after laparoscopic myomectomy. *J Am Assoc Gynecol Laparosc* 1998;5:237-40.
 8. Falcone T, Bedaiwy MA. Minimally invasive management of uterine fibroids. *Curr Opin Obstet Gynecol* 2002;14:401-7.
 9. Vavala V, Lanzone A, Monaco A et al. Postoperative GnRh analog treatment for the prevention of recurrences of uterine myomas after myomectomy. A pilot study. *Gynecol Obstet Invest* 1997;43:251-4.
 10. Fedele L, Vercellin P. Treatment with GnRh agonists before myomectomy and the risk of short-term myoma recurrence. *Br J Obstet Gynecol* 1990;97:393-6.
 11. Friednan AJ, Fine C, Daly M et al. Recurrence of myomas after myomectomy in women pretreated with leuprolide acetate depot or placebo. *Fertil steril* 1992;58:205-8.
 12. Goldfarb HA. Nd:YAG laser laparoscopic coagulation of symptomatic myomas. *J Reprod Med* 1992;37:636-8.
 13. Rossetti A, Sizzi O, Soranna L. Long-term results of laparoscopic myomectomy; recurrence rate in comparison with abdominal myomectomy. *Hum Reprod* 2001;16:770-4.
 14. Zreik T, Rutherford TJ, Palter SF. Cryomyolysis, a new procedure for the conservative treatment of uterine fibroids. *J Am Assoc Gynecol Laparosc* 1998;5:33-8.