

To Evaluate the Open Surgical Management Options in Patients Suffering from Symptomatic Uterine Fibroids at Tertiary Care Hospital

Saira Parveen, Yasmeen Joyo and Afra Rehman

Open Surgical Management Options in Patients Suffering from Symptomatic Uterine Fibroids

ABSTRACT

Objective: To evaluate the open interventional management options and their outcome in patients suffering from fibroid uterus at tertiary care hospital

Study Design: Cross Sectional study.

Place and Duration of Study: This study was conducted at the Department of Gynae and Obstet Unit 2, PMC Hospital Nawabshah from January 2017 to December 2017.

Materials and Methods: This study was conducted at Peoples Medical College Hospital Nawabshah. All the patients were admitted through Out Patient Department (OPD) and emergency department with history heavy menstrual bleeding lower back pain, pelvic pain, infertility, miscarriages and pain during intercourse etc. Thorough clinical examination along with required biochemical and radiological investigations were done. Diagnosis was made and treated accordingly.

Results: This is one year study of total 50 patients. It included two groups of female patients. Group A included 15 (30%) patients aged between 20 to 35 years. Group B included 35 (70%) aged from 36 to 56 years. Group A patients underwent myomectomy and group B were operated for open trans abdominal Hysterectomy (open TAH).

Conclusion: Myomectomy and trans abdominal hysterectomy are the better procedures in our study to cure the disease of uterine fibroids.

Key Words: Uterine Fibroid, Myomectomy, Bleeding, Back pain

Citation of articles: Parveen S, Joyo Y, Rehman A. To Evaluate the Open Surgical Management Options in Patients Suffering from Symptomatic Uterine Fibroids at Tertiary Care Hospital. Med Forum 2019;30(4):49-52.

INTRODUCTION

Uterine fibroids are simply defined as the benign tumors of smooth muscle of the uterus. They originate from myometric cells. According to estimates, this disease affects 20-80% of women by the age of fifth decade of their life. In America, this disease directly costs upto 10.3 billion U.S dollars in a year.¹ According to an estimate, about 2 lac hysterectomies, 30000 myomectomies and thousands of uterine artery embolizations are done in a year. This immensely affects the psychology and economy of the patient. In 2013, 171 million people were affected by this disease.² The most common type known as intramural is found in muscular wall of uterus. Another type is subserosal fibroids present on uterine surface.

Department of Obstet & Gynea, PUMHSW Nawabshah.

Correspondence: Dr. Saira Parveen, Assistant Professor of Obstet & Gynea, PUMHSW Nawabshah.

Contact No: 0335-3159532

Email: sairamemon1976@gmail.com

Received: October, 2018

Accepted: February, 2019

Printed: April, 2019

Submucosal fibroids are located in muscle beneath endometrium of uterus. The site of cervical fibroids is cervix wall/neck of uterus. Rarely these are found in round ligament, broad ligament or uterosacral ligament.³ Growth, site and number are important factors playing role in the development of this disease. They are monoclonal in origin and 50% develop owing to chromosomal abnormalities. Mutations of the MED12 protein occur in 70% of patients.⁴

Risk factors for the development of this disease are obesity, level of estrogen and progesterone growth, diabetes mellitus, polycystic ovarian syndrome and hypertension. Half of the patients develop this disease due to genetic abnormality as diseased mother make their daughter's prone to develop the same disease. First degree relatives are more prone to develop this disease. Same is for monozygotic twins as compared to dizygotic ones.⁵

Women of reproductive age develop the disease because menopause decreases their size that is why it is rarely found in menopausal age. Symptoms are variable in patients as most of the females are usually asymptomatic while others present with complain of painful or heavy menstrual cycle. They also have complaint of menorrhagia, dysmenorrhia, retention of urine, tenesmus, hydronephrosis, iron deficiency anemia, constipation, belatedness and lower back pain.

During pregnancy, miscarriage, bleeding, premature labor or changes in position of baby are also due to uterine fibroids. On examination, pelvic mass is palpated that may be single or multiple, irregular and nodular.⁶ Blood investigations include blood complete picture, iron studies, thyroid profile and measurement of follicular stimulating hormone, leutenizing hormone, estrogen and beta human chorionic gonadotrophin levels.⁷

Ultrasonography is the investigation of choice in its diagnosis. It evaluates the endometrium and myometrium and provides information regarding the number, size and position of fibroids and the vascularity of uterus. Transvaginal ultrasound is the gold standard method to get accuracy of diagnosis. Additional investigation to get more accurate diagnosis is hysteroscopy and guides the treatment plan for the disease. Magnetic resonance imaging (MRI) tells the size and site of fibroids in uterus. Large fibroids more than 9 cm needs computed tomography Scan (CT Scan) and this modality helps to evaluate the malignancy in postoperative follow up.⁸

Symptomatic uterine fibroids are treated by various methods viz medical therapy, ultrasound guided destruction, myomectomy/radiofrequency ablation, hysterectomy and uterine artery embolization.⁹ Conservative treatment involves Non Steroidal Anti Inflammatory Drugs (NSAIDS), iron supplementation, oral contraceptive pills, levonorgestrel intrauterine devices, Cabergoline, Ulipristal acetate, Danazol, Gonadotropin releasing hormone analogs, mifepristone and aromatase inhibitors. Surgical options includes myomectomy, Hysterectomy and endometrial ablations. These procedures can be done by open or laparoscopic methods.¹⁰

The rationale of our study is to evaluate open surgical procedures in patients suffering from uterine fibroids in order to protect patient from psychological trauma and economic loss.

MATERIALS AND METHODS

A one year cross sectional study of 50 patients was conducted at Peoples Medical College Hospital Department of Gynecology/Obstetrics Unit 2 from January 2017 to December 2017. This tertiary care hospital not only serves the patients of Sind province but also throughout Pakistan. It not only drains whole Sind Province but the patients coming from other provinces of Pakistan. All the patients were admitted through the outdoor patient department (O.P.D) and emergency departments. The patients suffering from minor/ heavy bleeding per vagina, lower abdominal pain, pain during intercourse, lower back pain, menorrhagia, dysmenorrhia and sometimes constipation, tenesmus were admitted. Detailed history along with thorough clinical abdominal, pelvic, vaginal and back examination in addition to digital rectal

examination (DRE) was done. Apart from routine biochemical investigations, patient was advised to get ultrasound of abdomen and pelvis. Transvaginal ultrasound was also done to evaluate the disease in all aspects. X ray abdomen and pelvis was gotten to reach the diagnosis. Patients having large fibroids were evaluated by CT scan. Diagnosis was made and surgery was made according to the location, growth and the number of fibroids in the Uterus. Cardiac and anesthesia fitness was gotten to proceed for the procedure. After taking consent, patient was shifted to O.T and the required procedure was performed.

RESULTS

In our study, total 50 patients were studied. All patients were divided into two groups. Group A patients included 15 (30%) patients aged between 20 to 35 years. The average age in this group was 30. Group B included 35 (70%) patients aged from 36 years to 56 years. Average age in this group was 40 years. Of group A 15 patients, 10 (20%) patients had single fibroids where as 5 (10%) had small multiple fibroids diagnosed after required investigations. Of total 35 patients of group B, 25 (50%) patients had multiple large fibroids and 8 (16%) patients had endometrial masses 2 (4%) patients had large uterus ovarian masses as shown in table below

Table No.1: Diagnosis

S.No	No of Patients	Percentage	Diagnosis
1	10	20%	Single Fibroid
2	30	60%	Multiple fibroids
3	8	16%	Endometrial mass
4	2	4%	Utero ovarian mass
Total	50	100%	

The type of procedure was decided keeping in view the symptoms, signs and result of investigations. The symptoms are different according to the size, type and number of fibroids as is shown in table 2.

Table No.2: Symptoms/Signs

S.No	Symptoms/signs	No of patients	%age
1	Painful menstrual bleeding	30	60%
2	Heavy menstrual bleeding	30	60%
3	Anemia	31	62%
4	Retention of urine	2	4%
5	Constipation	5	10%

Type and Size of the fibroid was also kept in view for making decision of type of surgery to be performed.

Group A patients had mild to moderate symptoms with size of fibroids ranging from 2 to 5cm and the type was subserosal. Number of fibroids was from single to multiple. Type B had severe symptoms with large size having number from single to multiple. Size of fibroids was from 6 to 20cm. Total 15 patients of Group A underwent Myomectomy whereas 35 patients of Group B were operated for open Total Abdominal Hysterectomy.

The parity of patients also was different accordingly. 15 patients of group A had parity from 0, 1⁺⁰, 2⁺⁰, 3⁺⁰. 35 patients parity also varied from 0⁺³, 2⁺⁰, 0, 5⁺³, 3⁺⁰, 4⁺⁰, 8⁺¹, 9⁺², 10⁺⁰, 4⁺¹ as is shown in table 3 below

Table No.3: Parity

S.No	Group A patients	Parity
1	5	1 ⁺⁰
2	5	2 ⁺⁰
3	5	3 ⁺⁰
Total	15	
S.No	Group B patients	Parity
1	2	0 ⁺³
2	2	2 ⁺⁰
3	10	0
4	3	5 ⁺³
5	4	3 ⁺⁰
6	5	4 ⁺⁰
7	2	8 ⁺¹
8	1	10 ⁺⁰
9	2	9 ⁺²
10	4	4 ⁺¹
Total	35	

Among group A patients, 2 (4%) developed infected wound postoperatively. Only 1(2%) patient presented with subcutaneous hematoma. None of the patients came with complain of postoperative adhesions or bleeding from operative site.

Table No.4: Postoperative complications

S.No	Postoperative complications	Group A	Group B
1	Infected wound	2(4%)	7(14%)
2	Subcutaneous hematoma	1(2%)	2(4%)
3	Adhesions	0%	5(10%)
4	Bleeding	0%	0%
5	Hematuria	-	0%
6	Ureter ligation	-	0%

Group B patients also came with postoperative complications. 7(14%) patients developed infected wound that was treated accordingly. 2 (4%) patients developed subcutaneous hematoma that was drained. 5 (10%) patients were readmitted with complain of postoperative adhesions and sub acute intestinal obstructions that were treated conservatively. None of

the patient came with complain of ureter ligation, bleeding from operative site or hematuria as is shown in table 4.

DISCUSSION

The uterine fibroid is a benign tumor commonly leiomyoma. It enormously affects the life of a women suffering from single or multiple uterine fibroids. It creates a psychological trauma to the patient. In our setup, it is commonly treated by three ways viz conservatively, uterus sparing procedure (Myomectomy) and Trans abdominal Hysterectomy. Though laparoscopic procedures are commonly being performed throughout globe but in our set up, open interventions are considered to be good with excellent outcomes.¹¹

Stewart et al study showed heavy menstrual bleeding and anemia as most common clinical features. Similarly in our study, patients usually presented with complain of heavy menstrual bleeding and anemia. Baird et al concluded that the uterine fibroids are common by age 50. Same is found in our study that average age for Group B patients is 40. Wise at el showed the prevalence of uterine fibroids at earlier age but in our study most of the patients have been admitted at age of their third and fourth decade of life. Donnez at el has indicated in study the high recurrence rate by 59% among those patients who underwent myomectomy but in our study, recurrence rate is 10% only.¹²

Peddad et al has concluded the study with increase in size of fibroids with increasing age. Same is noted in our study also. Petreglia et al study showed the 1st pregnancy in third decade of life as major risk factor for developing fibroids in uterus. But in our study no any such thing is noted.¹³

Fibroids cause infertility to women at any stage by several mechanisms. It changes the local anatomy of uterine cavity changing the functions of endometrium of uterus subsequently functional changes. Fertility is affected by impairment of gamete transport and reduction of blastocyst implantation.¹⁴

Hysterectomy for benign diseases usually improves in symptoms and rarely develops pelvic pain but it is contradictory to hysterectomy done for malignant cause as patients continuously complain of pelvic pain. A study showed that patients have greater risk of cardiovascular disease if hysterectomy is done at 50 or before but no association is found in studies after 50. A study showed that patients after this procedure developed osteoporosis and bone fractures due to effect of estrogen on calcium metabolism.¹⁵

One study showed that patients developed postoperative adhesions after hysterectomy due to gravity dependent pelvis where bowel fall and adhere. In our study, 10% of patients developed postoperative adhesions. A study concluded the wound infection up to 3% postoperatively but in our study, it was 14%.¹⁶

CONCLUSION

It is concluded that myomectomy is the uterus sparing procedure so that women may keep on continuing her family. Abdominal hysterectomy is the procedure with uterus removing but giving relief patients from psychological trauma of severe symptoms and economical loss.

Author's Contribution:

Concept & Design of Study: Saira Parveen
 Drafting: Yasmeen Joyo
 Data Analysis: Afra Rehman
 Revisiting Critically: Saira Parveen, Yasmeen Joyo
 Final Approval of version: Saira Parveen

Conflict of Interest: The study has no conflict of interest to declare by any author.

REFERENCES

1. Parker WH. Etiology, symptomatology, and diagnosis of uterine myomas. *Fertil Steril* 2007;87(4):725–36.
2. Mas A, Tarazona M, Carrasco JD, Estaca G, Cristóbal I, Monleón J. Updated approaches for management of uterine fibroids. *Int J Women Health* 2017; 9: 607–617.
3. Donnez J, Dolmans M: Uterine fibroid management: from the present to the future. *Hum Reprod Update* 2016;22(6):665–86.
4. Zimmermann A, Bernuit D, Gerlinger C, et al. Prevalence, symptoms and management of uterine fibroids: an international internet-based survey of 21,746 women. *BMC Womens Health* 2012;12:6.
5. Nelson AL, Ritchie JJ: Severe anemia from heavy menstrual bleeding requires heightened attention. *Am J Obstet Gynecol* 2015; 213(1):97.e1–6.
6. Borah BJ, Nicholson WK, Bradley L. The impact of uterine leiomyomas: a national survey of affected women. *Am J Obstet Gynecol* 2013;209(4):319.e1–319.e20.
7. Donnez J, Tomaszewski J, Vázquez F. Ulipristal acetate versus leuprolide acetate for uterine fibroids. *N Engl J Med* 2012;366(5):421–32.
8. Protic O, Toti P, Islam MS. Possible involvement of inflammatory/reparative processes in the development of uterine fibroids. *Cell Tissue Res* 2016;364(2):415–27.
9. Markowski DN, Bartnitzke S, Löning T. MED12 mutations in uterine fibroids--their relationship to cytogenetic subgroups. *Int J Cancer* 2012;131(7):1528–36.
10. Markowski DN, Helmke BM, Bartnitzke S, et al. Uterine fibroids: do we deal with more than one disease? *Int J Gynecol Pathol* 2014;33(6):568–72.
11. Dariushnia SR, Nikolic B, Stokes LS, et al. Quality improvement guidelines for uterine artery embolization for symptomatic leiomyomata. *J Vasc Interv Radiol* 2014;25(11):1737–47.
12. Zupi E, Centini G, Sabbioni L, et al.: Nonsurgical Alternatives for Uterine Fibroids. *Best Pract Res Clin Obstet Gynaecol.* 2016; 34:122–31.
13. Gupta JK, Sinha A, Lumsden MA Uterine artery embolization for symptomatic uterine fibroids. *Cochrane Database Syst Rev* 2014;(12):12-5.
14. Ernest A, Mwakalebela A, Mpondo BC. Uterine fibroid management: from the present to the future Malawi. *Med J* 2016;28(1): 31–33.
15. Cruz MD, Buchanan EM. Uterine Fibroids: Diagnosis and Treatment. *Am Fam Physician* 2017 ;95(2):100-107.