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Surgical versus Non-Surgical Management in Fibroid Uterus: A Prospective Observational Study

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Abstract

Background and Aim: Uterine fibroid is the benign condition, known to occur more during reproductive period of women. It is mainly caused due to increased level of estrogen & progesterone & peptide growth. Current management strategies mainly involve surgical interventions, but choice of treatment is guided by patient's age and desire to preserve fertility or avoid 'radical' surgery such as hysterectomy

Material and Methods: It is the prospective observational study conducted in patients of department of Obstetrics and Gynecology at tertiary care hospital for the duration of one and half year. The treatment prognosis and outcome was measured in the symptomatic relief in patients, increase in quality of life, decrease in size of fibroid present, requirement of blood transfusion, definitive length of stay in the hospital and successful pregnancy after the line of management.

Results: Of the total 60 patients diagnosed with fibroid uterus, there were 20 patients with fibroid size less than 8 cm and in 40 patients the size of fibroid was more than or equal to 8 cm. Among the 32 patients treated with medical line of management, 10 patients were treated with tablet ulipristal acetate 5 mg od for 3 months. Amongst the 28 patients treated surgically, in 7 patients myomectomy was done, 2 patients underwent vaginal hysterectomy, in 2 patient's laparoscopic assisted vaginal hysterectomy done (LAVH) and 17 patients underwent total abdominal hysterectomy (TAH).

Conclusion: The choice of treatment must be individualized to the women's need and her clinical presentation. Medical line of management is best for patients in younger age group, small size fibroid, desire for future fertility. In medical line of management, ulipristal and mifepristone have better outcomes.

Key Words: Laparoscopic assisted Vaginal Hysterectomy, Quality of Life, Total Abdominal Hysterectomy, Uterine fibroid

Introduction

Uterine fibroids are the commonest benign tumours of the uterus, also known as fibromyoma or leiomyoma. The exact etiology is not known, but probably the tumour is of muscle tissue origin. The muscle tissue of origin may be the mature muscle

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cells of the uterine wall or the muscle fibres in the blood vessel walls. There is substantial evidence that estrogen place an important role in the growth of myomas.[1,2]

Various psychological factors like mental shock, grief, mortification, vexation and the stress and strain of modern life could be the root cause of hormonal imbalance through psycho-nuero-hormonal pathway leading ultimately to pathological changes in the uterus. There are three basic types of uterine fibroids which are identified by their location in the uterus, namely intramural, subserous and submucous.[3,4]

In majority of the patient there are no obvious symptoms. The symptoms usually occur depending on the site and size of the fibroids. Generally the presenting symptoms are menorrhagia, metrorrhagia and gradual swelling of abdomen with dull aching pain.[5] Moreover pressure symptoms include increased frequency of micturation ,retention of urine, hydronephrosis, pedal oedema and in rare cases constipation. About 30% of women with uterine fibroids present with infertility.[6]

Uterine fibroid is the benign condition, known to occur more during reproductive period of women. It is mainly caused due to increased level of estrogen & progesterone & peptide growth.[7] Abnormality of chromosome 12 suggests a genetic role in pathogenesis of these tumours. These are more common in nulliparous. These tumours are formed of a mixture of muscle tissue containing fibrous tissue.[8]

Magnetic resonance imaging (MRI) provides information on number of fibroids, their size and location, vascularization, relationship with endometrial cavity and serosal surface and boundaries with normal myometrium.[1] Pharmacological management of fibroid includes oral contraceptives, progestins, progesterone receptor antagonist mifepristone, selective progesterone receptor modulator (SPRM) ulipristal, which has mixed progesterone agonist/antagonist and GnRH agonist and antagonist.[9,10]

Surgical treatment includes hysterectomy (abdominal, vaginal and laparoscopic) and myomectomy (laparotomy, laparoscopic and hysteroscopic). New approaches, such as myolysis, focused ultrasound, transvaginal cryomyolysis and uterine artery embolization (UAE), laparoscopic uterine artery occlusion (LUAO), doppler guided uterine artery occlusion (D-UAO).[11]

Current management strategies mainly involve surgical interventions, but choice of treatment is guided by patient's age and desire to preserve fertility or avoid 'radical' surgery such as hysterectomy.

Materials and Methods

The present study was undertaken at Medical College and Hospital. The cases were taken from the OPD's and rural OPD's during the period of two years. Sixty cases of uterine fibroid were selected on the basis of simple random technique sampling procedure. Sixty uterine fibroid patients belonging to age group 30 - 45 were included in the study. All the pregnant ladies and Fibroid showing changes of leiomyosarcoma are excluded from study.

The cases were recorded keeping the individualistic and holistic concept in mind. The data was collected by interrogation and physical examination of the patient. Case taking was done according to the Case Proforma in Annexure-I with a special emphasis to ascertain the following points. Fibroid uterus was diagnosed by abdominal examination, bimanual examination, and confirmation was done ultrasound, MRI, hysteroscopy or laparoscopy.

The choice of the type of treatment depends on the age of the patient, severity of symptoms, desire to become pregnant in future and importance of preservation of uterine. Medical treatment was preferred for young female patients, those with less severe symptoms and for those who have esire for future fertility planning.

The first medical line of management includes GnRH agnoists such as leuprolide, Ulipristal acetate, mifepristone (Progesterone receptor antagonist) and levonorgestrel IUDs. The drug leuprolide is given as injection, 3.75 mg is given monthly or 3 months. Tab mifepristone 25 mg is given OD daily or 3 months. Tab Ulipristal acetate id given 5 mg daily OD for 3 months. The surgical treatment included the procedure like myomectomy and hysterectomy (Abdominal, laparoscopic and vaginal).

The treatment prognosis and outcome was measured in the symptomatic relief in patients, increase in quality of life, decrease in size of fibroid present, requirement of blood transfusion, definitive length of stay in the hospital and successful pregnancy after the line of management. Outcomes of surgical management measured in terms of quality of life, requirement of blood transfusion, length of stay in hospital and successful pregnancies.

Results

A total of sixty patients diagnosed with fibroid uterus were admitted in the hospital and included in the study. Thirty patients were given the medical line of management and thirty patients underwent the surgical procedure. The characteristic features such as age, parity, size of fibroid and desire for future fertility were studied. The 10 patients after medical line of management have undergone surgery.

The age range of the included patients was from 25 to 60 years. The maximum number of 42 patients did belong to the age group of 35 to 55 years. There were 13 patients that belong to the age below 35 years and there were 5 patients with age more than 55 years.

Of the total sixty patients diagnosed with fibroid uterus, 18 patients were nullipara, 12 patients were primipara and the reminaing 30 patients were designed as multipara. The nullipara and primipara designated patients were considered for medical line of management. The rest multipara patients were considered for surgical line of treatment.

Of the total 60 patients diagnosed with fibroid uterus, there were 20 patients with fibroid size less than 8 cm and in 40 patients the size of fibroid was more than or equal to 8 cm. Among the 40 patients, the medical line of treatment was given to 12 patients and only 2 patients responded while remaining 10 patients landed up in surgery.

Among the 32 patients treated with medical line of management, 10 patients were treated with tablet ulipristal acetate 5 mg od for 3 months. After 3 months, 07 patients had relief of symptoms and quality of life improved while, 03 patients had no relief of symptoms and required surgery subsequently. Among the 10 patients treated with ulipristal, size of fibroid was decreased in 9 patients.

The 12 patients were given injection leuprolide 3.7mg monthly for 3 months, 6 patients showed relief of symptoms and improved quality of life, remaining 6 patients underwent surgery. The size of fibroid decreased in 10 patients.

The 10 patients treated with tablet mifepristone 25 mg OD daily for 3months, among these 8 patients showed relief of symptoms and improved quality of life, 2 patients needed subsequent surgery. In 6 patients treated with mifepristone, size of fibroid decreased. In 4 patients, LNG was inserted and all these patients had improved quality of life, and size of fibroid decreased in only 1 patient.

Amongst the 28 patients treated surgically, in 7 patients myomectomy was done, 2 patients underwent vaginal hysterectomy, in 2 patient's laparoscopic assisted vaginal hysterectomy done (LAVH) and 17 patients underwent total abdominal hysterectomy (TAH). All patients treated surgically had relief of symptoms, had improved quality of life.

Among the 32 patients treated medically, 2 patients needed blood transfusion. In 28 patients treated surgically, 9 patients needed blood transfusion. Length of stay in hospital is more with surgical line of management. Among the surgeries length of stay is higher in total abdominal hysterectomy and is less in myomectomy patients.

Table 1: Medical management of the uterine fibroids patients

Medicine	Relief of symptoms	Requiring surgery	Decrease in size
ulipristal acetate	7	4	9
leuprolide	6	6	10
mifepristone	8	2	6

Discussion

The present study was designed to demonstrate the best choice of treatment for patients with diagnosis of fibroids in uterus. The factors that were taken in consideration were size of fibroids, desire for future fertility and age of patients. Patient with small size fibroid (size <5 cm) and/or desire for future fertility should be considered for medical line of management.

Our study demonstrates the best choice of treatment for patients with primary diagnosis of uterine fibroids, considering the factors such as size of fibroid, age of the patient, desire for future fertility. Patient with small size fibroid (size <5 cm) and/or desire for future fertility should be considered for medical line of management.

For younger patients, medical line of management is best and among the medical line of management, ulipristal and mifepristone have come up with best results, in terms of improvement in lifestyle, relief of symptoms, successful future pregnancies and decrease in size of fibroid.

Donnez et al[12] study concluded that ulipristal effectively control bleeding and shrink fibroids in patients with symptomatic fibroids. Levens et. al. study found ulipristal effective for reducing the size of individual fibroids and the overall fibroid burden as measured by total fibroid and uterine volume. A single course of 5 or 10 mg reduced fibroids size by 17 to 38%. Carbonell et al[13] studies stated that 68 to 100 percent of women in their trials reported pelvic pain. By three months of treatment, this was reduced to a range of 9 to 28 percent with those in lower dose groups having lower/equivalent prevalence of pelvic pain. LNG just reduces menorrhagia in fibroid uterus, it has nothing to do with the size of fibroid. Tosun et. al. suggested that LNG- IUD can improve bleeding even among women whose fibroid symptoms were considered appropriate for surgical intervention. However, quality of study was poor thus evidence to guide care is inadequate.[14]

Hysterectomy is preferred by the patients with low socioeconomic status as patients need to get treated in one setting, patient cannot afford medical line of management. Surgical morbidity/mortality such as blood loss, bowel injury, bladder/urethral injury, infection, postoperative pain and death have all been reported with hysterectomy.[15]

Conclusion

The choice of treatment must be individualized to the women's need and her clinical presentation. Medical line of management is best for patients in younger age group, small size fibroid, desire for future fertility. In medical line of management, ulipristal and mifepristone have better outcomes.

Ethical approval was taken from the institutional ethical committee and written Informed consent was taken from all the participants.

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