Original Research Article

To Study the Role of Mifepristone in treatment of Fibromyoma Uterus

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Abstract

Background & Method: The present study was carried out as a prospective longitudinal study among patients presenting with confirmed diagnosis of uterine fibroids. A total of 70 women with symptomatic leiomyoma were included in the study. Fibro-myoma patients visited to Obs & Gyn. OPD, BRD Medical College, Gorakhpur in Obs. & Gyn. OPD, BRD Medical College, Gorakhpur from (1st Oct 2016-30th Sept 2016) for duration of 01 year duration. **Result:** Menstrual blood loss assessment at first visit, one month and 3 month of treatment. At first visit mean PBAC score was 135.17±22.11, at one month mifepristone therapy it was 41.14±45.96 and at 3 months of therapy it was 14.24±31.60,post treatment follow-up after 3 months it was65.98±24.31 .The reduction in PBAC score at the end of 3 months was statistically significant (<0.0001). First visit all patients had menorrhagia at one month of treatment 10(14%) patients had menorrhagia,29(41%) patients had scanty menses ,35% patient have average menses,7% patient had amenorrhea. At 3 month of treatment 77% of patients become amenorrhic,10% had scanty menses,7% had normal menses only 6% had menorrhagia. **Conclusion:** As seen in present study there was significant reduction in Mean PBAC score by69.6% & 89.5%, mean fibroid volume by 14 % and 38% and mean uterine volume by14 %and 30% while an increase in mean hemoglobin by 9.10 gm/dl to 11.60 gm/dl during mifepristone treatmentat one month and at 3 months of the therapy respectively. , but after stopping treatment there was again increase in Mean PBAC score, mean fibroid volume and mean uterine volume while reduction in mean hemoglobin was seen.As a side effect of mifepristone therapy, endometrial thickness increased by 24.8% at the, simple endometrial hyperplasia in18% without premalignant potential ,7%of patients had increased liver taransaminase(SGPT) all at the end of 03 month therapy mifepristone cannot be concluded as definitive treatment for uterine fibroid.

Keywords: Mifepristone, Fibromyoma, Uterus.

Introduction

Uterine leiomyomas or fibroids are common gynecological problems among women in their 30's and 40's with a variable prevalence. However, symptomatic fibroids are accompanied with heavy menstrual flow, dysmenorrhea leading to Deterioration in the quality of life of a patient[1]. Therapeutic options for long-term treatment of uterine fibroids (UFs) have been very limited, with surgery being the mainstay of treatment for 100 years, with large recurrences of tumors. In accordance with a statistical analysis, 200,000 hysterectomies, 30,000 myomectomies, and thousands of selective uterine artery embolizations (UAEs) are performed annually in the USA to eliminate UFs, with a psychological load and economic costs to the patient and the health care

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system[2].In India, the prevalence of uterine fibroids (fibromyoma/leomyoma) among women hovers between 30-50%. Majority of women with fibroids are asymptomatic but in some women they show many symptoms like menstrual abnormalities(i.e. menorrhagia, metrorrhagia, polymenorrhoea, dys menorrhoea), dyspareunia, pressure symptoms, lower abdominal or pelvic pain, infertility, increase frequency of micturation etc. due to their size, number or location[3]. Although transvaginal ultrasound is the gold standard method for Uterine fibroid diagnosis in terms of accuracy and availability, it may be necessary to perform abdominal ultrasound and/or magnetic resonance imaging (MRI) to complete the study of these benign tumors[3]. Additionally, hysteroscopy remains the most accurate method to diagnose and plan the specific treatment in submucosal uterine fibroids, and hemoglobin evaluation can also be a cheap and easy method to determine iron deficiency anemia in women with heavy menstrual bleeding[4].

Material & Method

The present study was carried out as a prospective longitudinal study among patients presenting with confirmed diagnosis of uterine fibroids. A total of 70 women with symptomatic leiomyoma were included in the study. Fibro-myoma patients visited toObs& Gyn. OPD, BRD Medical College, Gorakhpur in Obs. & Gyn. OPD, BRD Medical College, Gorakhpur from (1st Oct 2016-30th Sept 2016) for duration of 01 year duration.

Inclusion criteria

- Diagnosed fibroid cases
- Fibroid size-2.5cm & above
- Reproductive age or premenopausal Accepting the use of non-hormonal contraceptive
- Agreeing to have ultrasound examination in every follow up or evaluation visit

Exclusion criteria

- Those who desire to become pregnant
- Breast feeding
- Hormonal contraception or any hormonal therapy received in the last 3months
- Mifepristone is contraindicated in conditions like active liver disease, renal disease, adrenal insufficiency, hemorrhagic disorders, inherited porphyrie's and in patients on anticoagulant or long-term corticosteroid therapy.

Methodology

A total of 70 women with symptomatic leiomyoma were included in the study. 25mg/day mifepristone was given to them over period of 3 months. Follow up was done at 1 month, 3 month and 3 months after treatment. The drug was started from D1-D3 of cycle, that is, in the early follicular phase so that it starts acting before the development of dominant follicle No study was placebo-controlled or blinded.

Data analysis: Data analysis has been done using Graph pad prism 6.0 statistical software. Data has been summarized in tables & graphs. If on comparison by multiple measures ANOVA the difference at different time points was found to be significant. Unpaired t-test and chi square test were used to compare the base line parameters to follow-up parameters. In all cases, $p<0.05$ was considered significant.

Results

Table 1:Comparison of PBAC Score at First visit and Follow- up after Mifepristone therapy(tab mifepristone 25 mg tab orally for 3 months)

PBAC score*	At 1st visit		At one month of treatment		At 3months of treatment		Post treatment follow up after 3 months	
	No. of patients	%	No. of patients	%	No. of patients	%	No. of patients	%
<50	0	0	36	51%	59	84%	10	14%
51-100	0	0	24	34%	7	10%	57	82%
101-150	56	80%	8	11%	4	6%	3	4%
151-200	14	20%	2	3%	0	0	0	0
MEAN±SD	135.17±22.11		41.14±45.96		14.24±31.60		65.98±24.31	
p value	**>0.05**		**<0.0001**		**<0.0001**		**<0.0001**	

*Menstrual blood loss assessed by pictorial blood analysis chart(PBAC).

Table no. 01 shows menstrual blood loss assessment at first visit, one month and 3 month of treatment. At first visit mean PBAC score was **135.17±22.11**, at one month mifepristone therapy it was **41.14±45.96** and at 3 months of

therapy it was **14.24±31.60**,post treatment follow-up after 3 months it was**65.98±24.31** .The reduction in PBAC score at the end of 3 months was statistically significant (<0.0001).

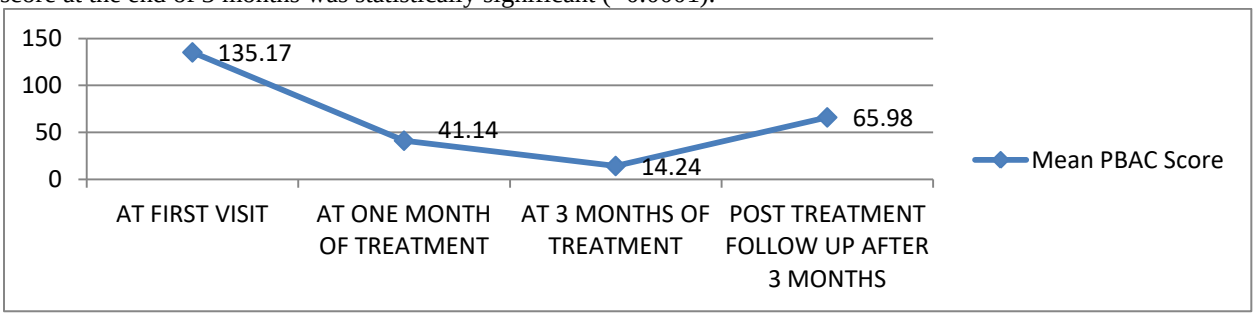

Fig 1:Comparison of PBAC Score at First visit and Follow- up after Mifepristone therapy(tab mifepristone 25 mg tab orally for 3 months)

Table 2:comparison of hemoglobin level in patients presenting with uterine fibroid at first visit and follow-up after mifepristone therapy

Hemoglobin level(gm%)	At 1st visit		At onemonth of treatment		3 months of treatment		Post treatment follow up after 3 months	
	NO.	%	NO.	%	NO.	%	NO.	%
>12	0	0	0	0	18	26%	3	4%
10-12	14	20%	27	38%	42	60%	64	91%
8-9.9	48	69%	41	59%	10	14%	3	4%
<8	8	11%	2	3%	0	0	0	0

Table no. 02 shows patients hemoglobin level in every visit. Because of menorrhagia significantly reduced mean hemoglobin levels noted in first visit. 48 (69%) patients had hemoglobin level 8-9.9 gm% (baseline), 20% had hemoglobin level 10-12 gm% ,11% had hemoglobin level below 8 gm%.

Table 3 : Improvement in mean hemoglobin level with mifepristone therapy

	Mean Hb%±SD	P value
At 1st visit	**9.1043±1.10**	**>0.05**
At one month of treatment	**9.5847±0.96**	**<0.0001**
At 3 months of treatment	**11.60±0.87**	**<0.0001**
Post treatment follow up after 3 months	**10.59±0.72**	**<0.0001**

Table no. 03 shows that,hemoglobin concentration improved with mifepristone therapy.At first visit(baseline) the mean hemoglobin was **9.1043±1.10** ,at one month of treatment it was **9.5847±0.96** and at the end of 3 month it was **11.60±0.87** . this increase in hemoglobin at the end of 3 months statistically significant (<0.0001).

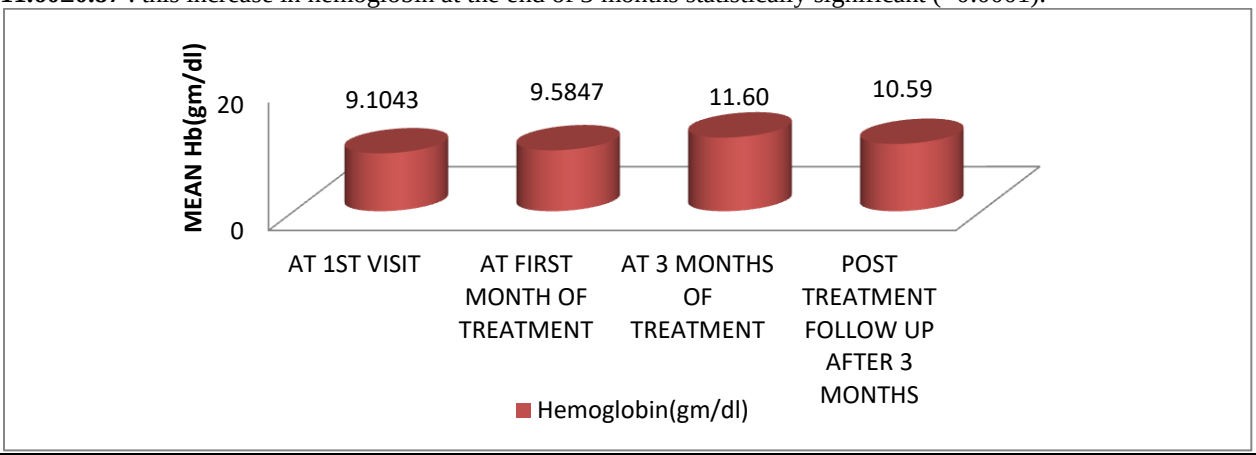

Fig 2 : Improvement in mean hemoglobin level with mifepristone therapy

Table 4: comparison of menstrual blood flow at first visit and follow-up after mifepristone therapy

Menstrual blood flow* (PBAC Score)	At 1st visit		At one month of treatment		3 months of treatment		Post treatment follow up after 3 months	
	NO.	%	NO.	%	NO.	%	NO.	%
Amenorrhea and spotting (0-15)	0	0	7	10%	54	77%	0	0
Hypomenorrhea (16-75)	0	0	29	41%	7	10%	42	60%
Average(76-100)	0	0	24	35%	5	7%	25	36%
Heavy (>100)	70	100%	10	14%	4	6%	3	4%

(*menstrual blood loss assessed by PBAC score)

Table no. 04 shows that at first visit all patients had menorrhagia .at one month of treatment 10(14%) patients had menorrhagia,29(41%) patients had scanty menses ,35% patient have average menses,7% patient had amenorrhea. At 3 month of treatment 77% of patients become amenorrhic,10% had scanty menses,7% had normal menses only 6% had menorrhagia.

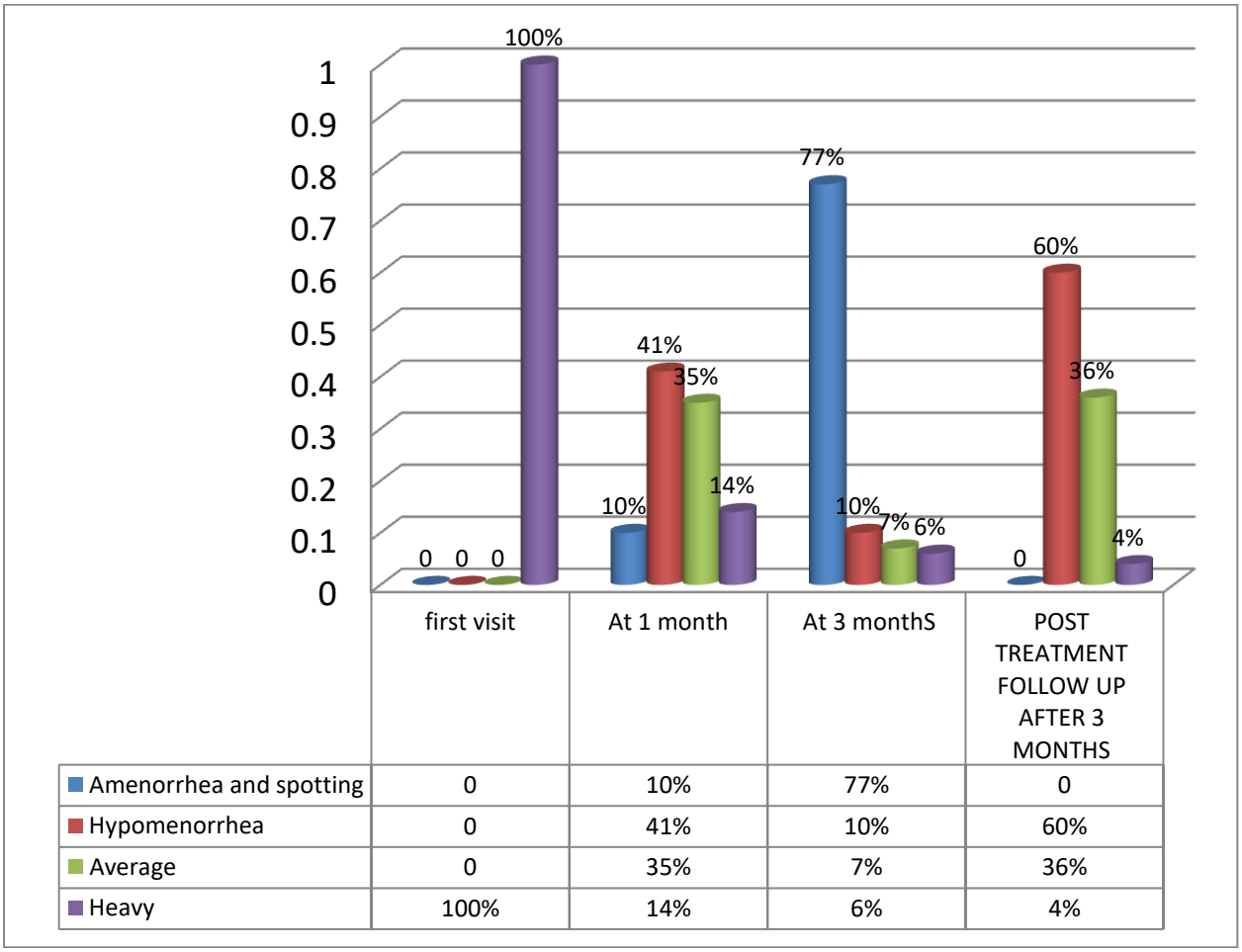

Fig 3: Comparison of menstrual blood flow at first visit and follow-up after mifepristone therapy

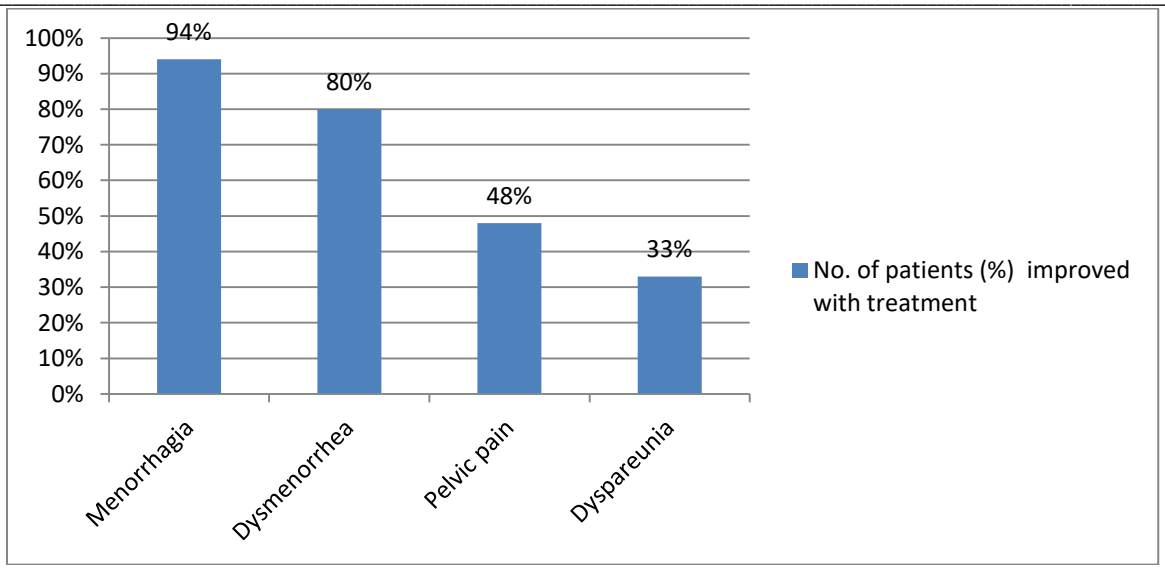

Fig 4: No. of patients (%) improved with treatment

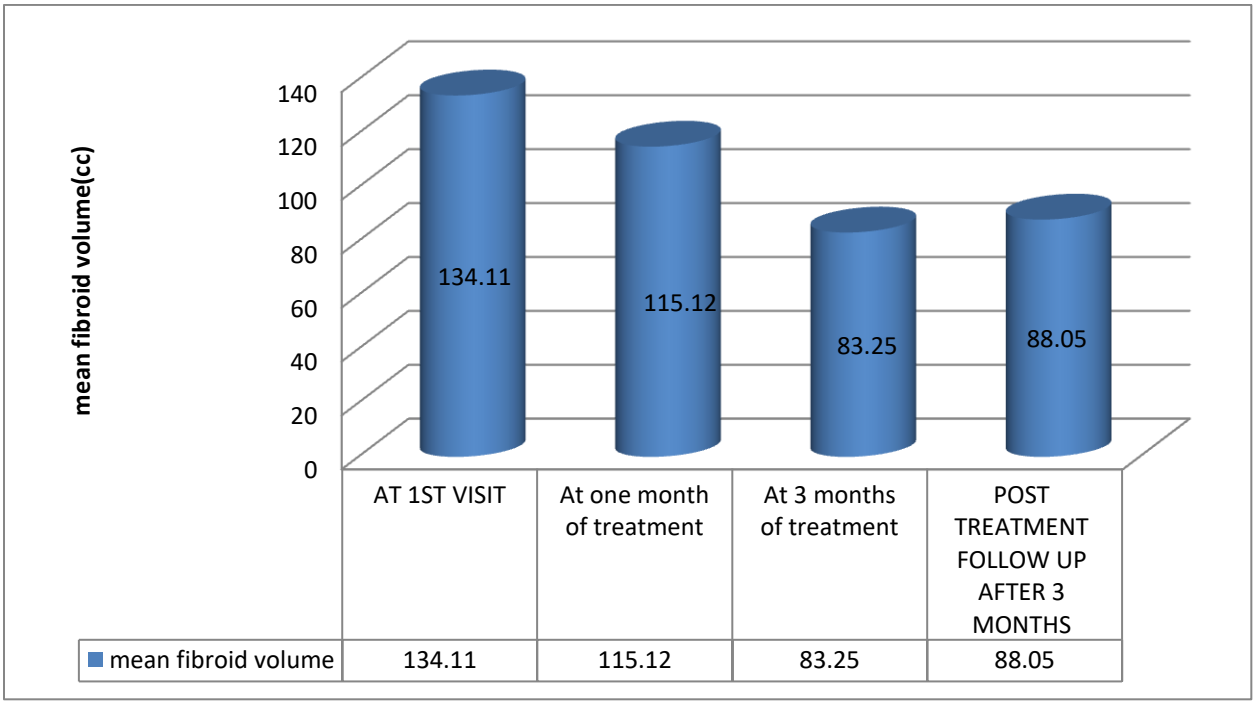

Fig 5: Mean Fibroid Volume

Discussion

At the beginning of the study all patients had menorrhagia 70 (100%).after 1 month of therapy 7 patients become amenorrhic,41% had scanty menses,35% had average menses, 14% had menorrhagia [5]. at 3 month of treatment 54 (77%)became amenorrhic,7(10%) had scanty menses,

5(7%) had average menses, 4(6%) had monorrhagia. post treatment follow up after 3 month of treatment 42(60%) had scanty menses,25(36%) had average menses,3(4%) had menorrhagia.

Study by Shradha et al[6] At the beginning of study, all patients had menorrhagia. After 1 month of therapy, none of patients had menorrhagia, 18 out of 50 had average menses, 22 had scanty menses and 10 became amenorrhic[7]. At 3 months, 40 out of 50(80%) developed amenorrhea and 10 out of 50 (20%) had scanty menses. At 6 months, 27 out of 50(56%) had scanty menses and 19 out of 50(38%) had normal menses but none had menorrhagia. In this study significant number of women was releived of menorrhagia, dysmenorrhea and pelvic pain. at 3 months of treatment with mifepristone therapy,94% patients got relieved of menorrheagia, 80% relieved of dysmenorrhea, 48% of pelvic pain,33% of dyspareunia [8]. There were some of associated symptoms 12% of patients were relieved of discharge per vaginum, 29% in backache and 25% in Increase frequency of micturation and 33% in constipation .there was no significant reduction were seen in associated symptoms in patients with uterine fibroid. According to M. bagaria et al[9] 80% relief of dysmenorrhea with 10 mg of mifepristone at the end of 3 month of therapy , only 33% patient got rid of pelvic pain and no there was no relief in backache ,urinary complaints and dyspareunia.

Conclusion

As seen in present study there was significant reduction in Mean PBAC score by69.6% & 89.5%, mean fibroid volume by 14 % and 38% and mean uterine volume by14 %and 30% while an increase in mean hemoglobin by 9.10 gm/dl to 11.60 gm/dl during mifepristone treatmentat one month and at 3 months of the therapy respectively. , but after stopping treatment there was again increase in Mean PBAC score, mean fibroid volume and mean uterine volume while reduction in mean hemoglobin was seen.As a side effect of mifepristone therapy, endometrial thickness increased by 24.8% at the, simple endometrial hyperplasia in18% without premalignant potential ,7% of patients had increased liver taransaminase(SGPT) all at the end of 03 month therapy mifepristone cannot be concluded as definitive treatment for uterine fibroid.

Conflict of Interest: Nil
Source of support:Nil

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