

**A study of uterine leiomyoma in association with age**

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**Abstract**

**Objective:** to see the association of uterine leiomyoma with age.

**Material & methods:** total 60 patients belonging to age group 18-50 years attending Gynaecology OPD of SMS MC College were enrolled in this study. Those diagnosed with leiomyoma on ultrasound scan were labelled as a case group. Control group comprised of 60 women whose pelvic ultrasound was normal and there was no fibroid. Volume of each fibroid was measured by transvaginal ultrasound. Statistical analysis was performed using suitable test of significance.

**Results:** majority (48.3% each in cases and controls) are in the age group of 46-50 years, there is no statistically significant difference in age group between the groups (P=0.557).

**Conclusion:** uterine leiomyoma are more common in age group 46-50 year, so this age group patient should visit Gynaecologist at regular interval.

**Keywords:** uterine leiomyoma, age, pelvic ultrasound, association, patients

**Introduction**

Uterine leiomyoma (fibroid) represents a localized proliferation of smooth muscle cells surrounded by a

pseudo capsule of compressed muscle fibers. <sup>1</sup> It is the most common benign tumor in the female genital tract and their prevalence during a women’s lifetime ranges from 50-80 %. Symptomatic women typically suffer from menstrual disorders, heavy menstrual bleeding, anemia, pelvic pain and “bulky symptoms” (bladder or rectal pressure). Moreover, uterine fibroids seem to be related to infertility, early pregnancy loss, and several adverse obstetric outcomes. The choice of the appropriate therapy for uterine fibroids is influenced by several factors, including the severity of symptoms, infertility, the tumor characteristics, the patient’s age, wish to preserve the uterus, and the desire of future pregnancies. <sup>2</sup> the mainstay treatment of uterine fibroid is surgery, in the form of myomectomy or hysterectomy, which in addition to cost burden also preclude future fertility. Therefore, it is crucial to search for novel nonsurgical alternatives for the prevention & management of uterine fibroids. Strategies should be developed to prevent its occurrence in the first place. <sup>3</sup> the present study was undertaken to see the association of uterine leiomyoma in respect with age, so preventive steps taken in high-risk age group.

## **Material and methods**

The study was conducted in the department of Obstetrics and gynecology at SMS medical college and hospital Jaipur, after ethical clearance from the institutional ethical committee.

Study Type: Hospital base comparative study

Study Design: Cross sectional study

Study Place: SMS medical college, Jaipur.

Study Duration: From February 2019 to February 2020.

Study Universe: All women attending Gynaecology OPD in SMS Medical College

## **Inclusion criteria**

1. Case group comprising of 60 Women between 18-50 years of age who was diagnosed with leiomyoma with mean diameter of > 10 mm at ultrasound.
2. Control group comprising of 60 women between 18-50 years whose USG was normal and there was no leiomyoma.
3. Women who were willing to give consent for study.

## **Exclusion Criteria**

1. Pregnant, lactating and menopausal women
2. Women currently using or who had used a vitamin supplement or any hormonal treatment within the 6 months prior to enrollment
3. Women having malignancy, multiple sclerosis and autoimmune disorders.
4. Severly ill patient
5. Non-cooperative

## **Study methodology**

After applying inclusion and exclusion criteria informed written consent was taken and women with complain of abnormal uterine bleeding and willing to participate was recruited from dept of obs and gynae SMS medical college Jaipur. Approval from institutional research, review board and ethical committee was taken.

Standardized data collection on a predesigned study Performa including a full AUB workup after the initial visit was done. Case group comprising of 60 women belonging to age group 18-50 years who was diagnosed with leiomyoma with mean diameter >10mm at ultrasound. Control group comprising of 60 women belonging to age group 18-50 years whose pelvic USG was normal and there was no fibroid. A Brief history was taken and gynecological examination was done and blood samples was collected for estimation of vitamin D3 level. Ultrasound evaluation was performed on all consenting subjects. Statistical analysis was done using suitable test of significance. Data thus collected was entered in excel sheet to prepare master chart and was subjected to statistical analysis.

Statistical analysis: Descriptive analysis was measured using means, frequencies, standard deviations, and percentages. The independent t-test was used to compare serum Vitamin D levels across groups. Association of vitamin D level with presence of leiomyoma was asssced by using unpaired t test. A P-value <0.05 was considered significant.

## **Results**

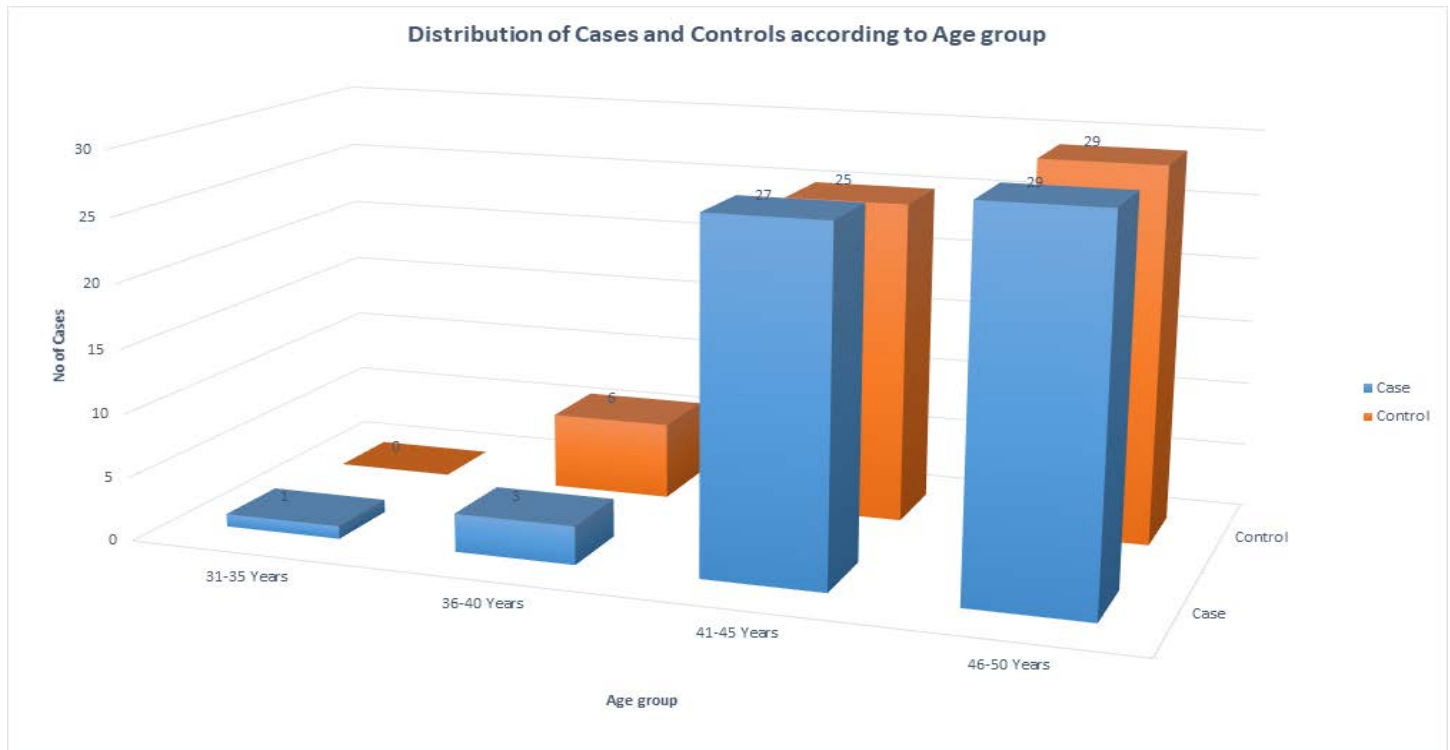
Uterine leiomyoma is the most common benign tumour in women of reproductive age group1-3 and second commonest Gynaecology clinic presentations for 3.2 – 7.6% of new gynecological cases4-6. The precise cause of uterine fibroids is unknown. They are associated with devastating consequences. The mainstay of treatment for uterine fibroid is hysterectomy which is not a favorable option, especially in women who desire to preserve their future fertility. Study subjects are divided into 60 cases and 60 controls, among them majority (48.3% each in cases and controls) are in the age group of 46-50 years,

there is no statistically significant difference in age group between the groups (P=0.557).

Table 1: Distribution of cases according to age group

Age Group		Group		Total
		Case	Control	
31-35 Years	No of Cases	1	0	1
	Percentage	1.7%	0.0%	0.8%
36-40 Years	No of Cases	3	6	9
	Percentage	5.0%	10.0%	7.5%
41-45 Years	No of Cases	27	25	52
	Percentage	45.0%	41.7%	43.3%
46-50 Years	No of Cases	29	29	58
	Percentage	48.3%	48.3%	48.3%
Total	No of Cases	60	60	120
	Percentage	100.0%	100.0%	100.0%
$\chi^2 = 2.077$		P = 0.557		

Graph 1



## Discussion

A major strength of the study is the study design, screening with use of ultrasound in women with fibroids, inclusion of women with similar gynaecologic complaints at the Gynaecology clinic, and matching for age, parity and BMI in women, within the same study period and participating center may have protected results from other cofounders. Study subjects are divided into 60 cases and 60 controls, among them majority (48.3% each in cases and controls) are in the age group of 46-50 years, there is no statistically significant difference in age group between the groups ( $P=0.557$ ). In a study done by Haj Hashemi M et al,<sup>83</sup> found that mean age in group A and Group B are  $40.58\pm 4.26$  and  $40.6\pm 4.08$  respectively, results are similar to our study which is  $45.17\pm 3.52$  in cases and  $44.98\pm 3.34$  in Controls. Fuldeore MJ et al<sup>84</sup> in his study also shows that across different age groups, the prevalence of uterine fibroids increased as women aged and was greatest in the 50–54 age group (11.4%; 95% CI: 10.4%–12.4%). Prevalence was 0.9% (95% CI: 0.7%–1.1%), 3.7% (95% CI: 3.1%–4.3%), 6.2% (95% CI: 5.3%–7.0%), 9.0% (95% CI: 0.7%–1.1%), and 11.1% (95% CI: 10.1%–12.2%) in the 18–29, 30–34, 35–39, 40–44, and 50–54 age groups, respectively.

## Conclusion

Uterine leiomyoma are more common in age group 46-50 year, so this age group patient should visit Gynaecologist at regular interval.

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