



Reproductive Performance of Women with Fibroids

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Abstract

The association between fertility and fibroid is known, however a cause-effect relationship is not established. Majority of studies are from infertility centers or referral hospitals. A retrospective study was undertaken in a Medical college drawing direct patients from a rural poor socio economic community. We compared the reproductive performance of 70 women with fibroids with equal number of age matched women attendants of Gynecological Outpatients. The fecundity of women with fibroid is 2.46 as compared to 2.56 in controls. Even though conception rate in women with sub mucous fibroids is slightly higher than controls, the live birth rate is significantly lower. The pregnancy loss in women with sub mucous fibroids is nearly double to that of control women. Women with fibroids without sub mucosal component fared equally well with controls. Hence we infer that women with sub mucous fibroids have more pregnancy losses and in a quest to have children try to have more conceptions.

Keywords – Fibroids; Infertility; Abortions; Pregnancy Loss.

Introduction

Leiomyomas of the uterus are the commonest pelvic tumours found in reproductive age women and most are asymptomatic. Fibroid occurs in 20-50% of all reproductive age group women increasing with age and myomas are the only abnormal finding in 1- 3 % of women with infertility.¹ The relationship between fibroids and fertility and reproductive performances is well

established. The question – fibroids are cause of infertility or the consequence of infertility or fibroids and infertility are concomitant diseases or both are the consequent manifestations of some other common disease is not answered yet. Epidemiological study of fibroids and reproductive performance will give a basic idea of the problem.

Materials and Methods

The study was conducted in VMMCH, Karaikal, Puducherry state, South India. Women who underwent surgery for fibroid uterus – open laparotomy hysterectomy, laparoscopic hysterectomy or myomectomy during the calendar year 2016 were the subjects of study and were assigned to Group 1. Age matched women who are the attendants of the women attending the obstetrics and gynaecology OP are the controls and were assigned to Group 2. Information from the hospital IP are records is extracted. Age, socioeconomic status, associated diseases, number of conceptions, deliveries, abortion, perinatal deaths, alive children, status of sterilisation;

The age wise distribution of women is

Table 1 - Age distribution

Age	21-30	31-40	41-50	51-60	Above 60	Total
Cases	01	26	38	04	01	70
Controls	01	27	36	05	01	70

Fertility –

Under Group 1 – 3 women never conceived and one had a spontaneous abortion, no further conceptions.

Under Group 2 – 3 women are nulli gravida

Under Group 1 - 51 underwent sterilization 48Tubectomy + 3 Vasectomy and 19 did not undergo sterilization.

Under Group 2- 49 underwent sterilization and 21 did not undergo sterilisation.

Table 2 - Obstetric performance

	Conceptions	Alive children	Perinatal deaths	Abortions	Nullipara	Sterilisation
Cases	212	172	010	030	003+001	051
Controls	208	179	004	025	003	049

In the women who underwent surgery for fibroids, the location of fibroids is,

operative findings – number, size, site of myomas-submucous, intramural, subserous were recorded. The Group 2 women were interviewed by OBG junior residents. USG pelvic organs done were recorded. Analysis is made on the findings thus obtained in both groups.

Results

70 women underwent surgery for fibroids during calendar year 2016- one underwent myomectomy and all others hysterectomy by laparotomy or laparoscopy.

91% women are in 30-50 years age group in Group 1 and 90% are in 30 – 50 years age group in Group 2.

Total number of conceptions in the 70 women of Group 1 is 212, compared to 208 in Group 2.

Group 1 women are having 172 alive children and Group 2 women are having 179 alive children.

Under group 1, there were 30 abortions and 10 perinatal deaths.

Under group 2, there were 25 abortions and 4 perinatal deaths.

Table 3 - Location of fibroids

Location of fibroids	Number
Sub mucous	07
Intramural	31
Sub serous	07
Sub mucous + Intramural	07
Intramural + sub serous	15
Sub mucous + Intramural + Sub serous	03
Total	70

14 out of 70 women had sub-mucous and sub-mucous + intramural fibroids. In the remaining there is no sub-mucous component.

Table 4 - Obstetric performance of women with fibroids (Average per woman in parentheses)

	Numbers	Conceptions	Alive children	Abortions	Perinatal deaths	Pregnancy losses
Sub mucous	14	045 (3.21)	032 (2.29)	09 (0.64)	04 (0.29)	13 (0.93)
Non submucous	56	167 (2.98)	140 (2.5)	21 (0.38)	06 (0.11)	27 (0.49)
Cases	70	212 (3.02)	172 (2.46)	30 (0.43)	10 (0.14)	40 (0.57)
Controls	70	208 (2.97)	179 (2.56)	25 (0.38)	04 (0.06)	29 (0.44)

Comparing the obstetric performance of fibroid women and non fibroid women –

Table 5 - Obstetric performance of fibroid Vs non fibroid women

	Women with Fibroids	Women without fibroids
Average conceptions	3.02	2.97
Alive children	2.46	2.56
Abortions	0.43	0.38
Pregnancy losses (abortions + peri natal deaths)	0.57	0.44
Percentage of alive children / conception	81%	86%
Percentage of pregnancy loss / conception	19%	14%

Comparing the obstetric performance of submucous involvement, non submucous involvement and no fibroid

Table 6 - Obstetric performance of women –comparison

	Sub mucous Fibroids	Non sub mucous Fibroids	No fibroids
	14	56	70
Conceptions / woman	3.21	2.98	2.97
Alive children / woman	2.29	2.50	2.56
Abortions / woman	0.64	0.38	0.38
Pregnancy losses / woman	0.93	0.49	0.44
Alive children % in conception	71%	84%	86%
Pregnancy loss % in conception	29%	16%	14%

On an average sub mucous fibroid women had 2.29 alive children compared to 2.56 for non fibroid women.

To compare women with sub mucosal component and no sub mucosal involvement –

Table 7 - Pregnancy outcome in conceptions

	Numbers	Alive children	Pregnancy losses
Sub mucous	14	71%	29%
Non sub mucous	56	84%	16%
Cases	70	81%	19%
Controls	70	86%	14%

Sub mucous fibroid women fared poorly in their obstetric performance. 29% had abortion or perinatal deaths and 71 % alive children compared to 14% and 86% respectively for non fibroid women.

Similarly on an average, women in group 1 had 0.64 abortion compared to 0.38 for group 2 women.

Discussion

Among women with infertility and uterine leiomyoma, pregnancy rates are primarily affected by leiomyoma location.²

Sub serosal fibroids do not appear to affect fertility or obstetric outcomes while intramural (regardless of cavity distortion) and sub mucosal myomas are associated with lower implantation and live birth rates.³

Eldar-Geva and colleagues performed a retrospective review of the treatment in patients

with uterine myomata and concluded that both pregnancy (16.4%) and implantation (6.4%) rates were significantly lower in women with intramural myomas.⁴

A meta-analysis of the effect of fibroids on the effect of myomectomy on fertility found that submucous fibroids that distort the uterine cavity appear to decrease fertility, with ongoing pregnancy/ live birth rates decreased by about 70%.⁵

Cumulative pregnancy rates appeared slightly lower in patients with intramural fibroids. however, patients with intramural fibroids also experienced more miscarriages, 20.4% vs 12.9%.⁶ The latest medical opinion states that sub mucosal myoma may cause different degrees of infertility in each study that was conducted. For example, Richards et al stated that a local inflammatory process may cause ulcerations due to the presence of slime that could eventually alter intrauterine

biochemical characteristics, producing an inappropriate environment for spermatozoas.⁷

The balance of data from independent studies by Farhi, Ramzy Jun and Surrey suggest that pregnancy outcomes and implantation rates are adversely affected by submucosal myomas that enter the uterine cavity but not by subserosal or intramural fibroids that are less than 5-7 cm in size.⁸

Conclusions

In a small series of 70 women, women with submucous fibroids fared poorly in their reproductive performance having increased frequency of spontaneous abortions and perinatal deaths.

In women without sub mucous fibroids the obstetric performance is comparable to normal women.

This a retrospective epidemiological study in a medical college catering to non-referral and referral women from rural low socioeconomic status.

The age of onset of fibroid development is not known. Further studies on a large group of women is necessary to confirm the findings.

Conflict of interest

This is an independent study , none of the authors have any conflict of interest.

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