

Assessment of Outcome in Pregnancy Complicated by Fibroid Uterus At a Tertiary Care Hospital

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ABSTRACT

Background: Uterine fibroids are a major cause of morbidity in women of a reproductive age. Hence; the present study was conducted with the aim of assessing the outcome of pregnancy complicated by fibroid uterus.

Materials & Methods: A total of 39 patients were enrolled in the present study. Only those patients were enrolled in which fibroid uterus was found. Complete demographic details of all the patients were obtained. Ultrasonogram done at booking visit and patients with fibroid of 5 cm and above were included in the study. During subsequent visits, assessment of the increase in the size of the fibroid and degeneration and other obstetric complications was done. All the results were recorded in Microsoft excel sheet and were analysed by SPSS software.

Results: Caesarean section was found in 82.06 percent of the patients while spontaneous vaginal delivery occurred in 15.38 percent of the patients. Pain abdomen was found to be present in 20.51 percent of the patients, while spontaneous miscarriage occurred in 5.13 percent of the patients. Postpartum occurred in 7.69 percent of the patients while threatened preterm labor occurred in 5.13 percent of the patients.

Conclusion: In patients with fibroid uterus, pregnancy is often associated with complications which need frequent follow-up and evaluation.

Key words: Pregnancy, Fibroid Uterus, Outcome.


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INTRODUCTION

Myomas have been complicated by changes like degeneration leading to abdominal pain whose severity is varied from mild to acute abdomen. Also, they are related to a lot of ante-, intra-, and postpartum complications like spontaneous abortion, antepartum hemorrhage, placental abruption, malposition of the fetus, fetopelvic disproportion, premature rupture of membranes, retention of the placenta, postpartum hemorrhage (PPH), preterm delivery, low birth weight infants, dysfunctional labor, and increased need to caesarean deliveries.¹⁻³

Uterine fibroids are a major cause of morbidity in women of a reproductive age (and sometimes even after menopause). There are several factors that are attributed to underlie the development and incidence of these common tumors, but this further corroborates their relatively unknown etiology. The most likely presentation of fibroids is by their effect on the woman's menstrual cycle or pelvic pressure symptoms. The gold standard diagnostic

modality for uterine fibroids appears to be gray-scale ultrasonography, with magnetic resonance imaging being a close second option in complex clinical circumstances.⁴⁻⁶

Spontaneous miscarriage rates are greatly increased in pregnant women with fibroids compared with control subjects without fibroids (14% vs 7.6%, respectively). The weight of evidence in the literature suggests that the size of the fibroid does not affect the rate of miscarriage, but multiple fibroids may increase the miscarriage rate compared with the presence of a single fibroid only (23.6% vs 8.0%). The location of the fibroid may also be important. Early miscarriage is more common in women with fibroids located in the uterine corpus (body) than in the lower uterine segment¹⁰ and in women with intramural or submucosal fibroids.⁵⁻⁷ Hence; the present study was conducted with the aim of assessing the outcome of pregnancy complicated by fibroid uterus.

MATERIALS & METHODS

The present study was conducted in the Department of Obstetrics & Gynaecology, Venkateshwara Institute of Medical Sciences, Gajraula, Amroha, Uttar Pradesh (India) and it included assessment of outcome of pregnancy complicated by fibroid uterus. Ethical approval was obtained from institutional ethical committee and written consent was obtained from all the patients after explaining in detail the entire research protocol. A total of 39 patients were enrolled in the present study. Only those patients were enrolled in which fibroid uterus was found. Complete demographic details of all the patients were obtained. Ultrasonogram done at booking visit and patients with fibroid of 5 cm and above were included in the study. During subsequent visits, assessment of the increase in the size of the fibroid and degeneration and other obstetric complications was done. All the results were recorded in Microsoft excel sheet and were analysed by SPSS software. Univariate regression curve was used for assessment of level of significance.

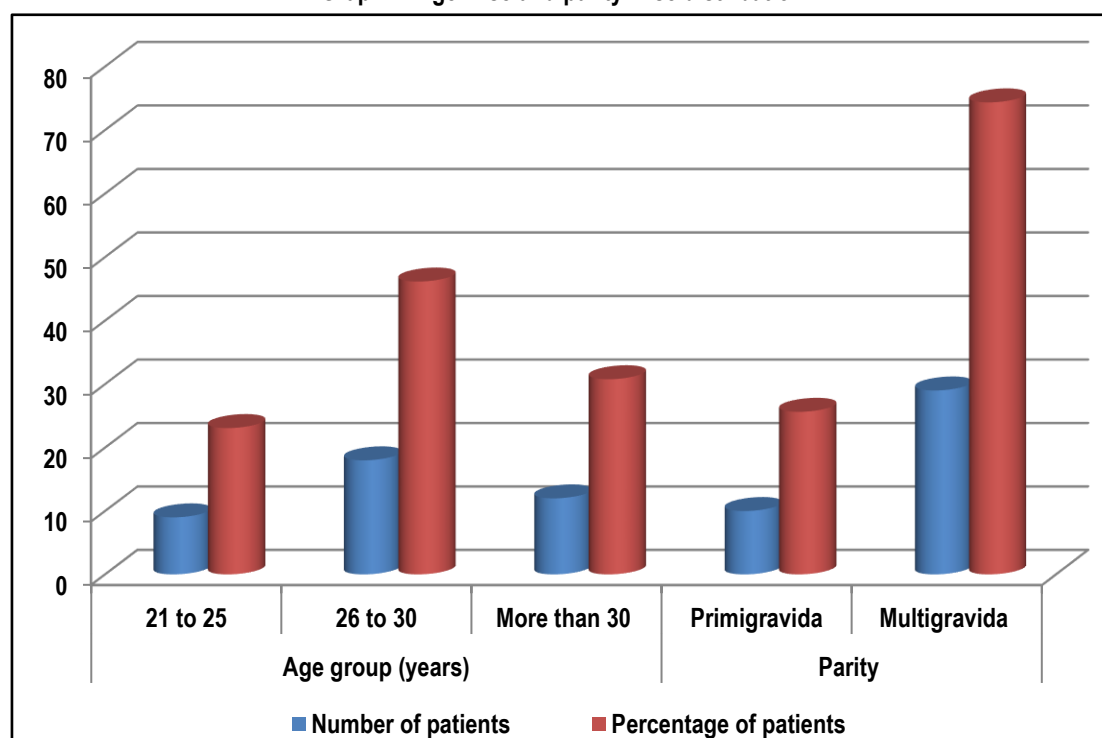
Table 1: Mode of delivery

| Mode of delivery | Number of patients | Percentage |
|---------------------|--------------------|------------|
| Spontaneous vaginal | 6 | 15.38 |
| Caesarean section | 32 | 82.06 |
| Vacuum application | 1 | 2.56 |
| Total | 39 | 100 |

Table 2: Complications during pregnancy

| Complications | Number of patients | Percentage |
|--------------------------|--------------------|------------|
| Asymptomatic | 24 | 61.54 |
| Spontaneous miscarriage | 2 | 5.13 |
| Postpartum | 3 | 7.69 |
| Threatened preterm labor | 2 | 5.13 |
| Pain abdomen | 8 | 20.51 |

Graph 1: Age-wise and parity-wise distribution



RESULTS

In the present study, a total of 39 patients were enrolled which were found to have fibroid uterus. Mean age of the patients was found to be 29.4 years. 46.15 percent of the patients belonged to the age group of 26 to 30 years. 30.77 percent of the patients belonged to the age group of more than 30 years. 74.36 percent of the patients were of multigravida while the remaining 25.64 percent of the patients were of primigravida.

In the present study, Caesarean section was found in 82.06 percent of the patients while spontaneous vaginal delivery occurred in 15.38 percent of the patients. Pain abdomen was found to be present in 20.51 percent of the patients, while spontaneous miscarriage occurred in 5.13 percent of the patients. Postpartum occurred in 7.69 percent of the patients while threatened preterm labor occurred in 5.13 percent of the patients.

DISCUSSION

Fibroids (leiomyomas) are benign smooth muscle cell tumors of the uterus. The diagnosis of fibroids in pregnancy is neither simple nor straightforward. Only 42% of large fibroids (> 5 cm) and 12.5% of smaller fibroids (3–5 cm) can be diagnosed on physical examination.

The ability of ultrasound to detect fibroids in pregnancy is even more limited (1.4%–2.7%) primarily due to the difficulty of differentiating fibroids from physiologic thickening of the myometrium. The prevalence of uterine fibroids during pregnancy is therefore likely underestimated.⁶⁻⁸ Hence; the present study was conducted with the aim of assessing the outcome of pregnancy complicated by fibroid uterus.

In the present study, a total of 39 patients were enrolled which were found to have fibroid uterus. Mean age of the patients was

found to be 29.4 years. 46.15 percent of the patients belonged to the age group of 26 to 30 years. 30.77 percent of the patients belonged to the age group of more than 30 years. 74.36 percent of the patients were of multigravida while the remaining 25.64 percent of the patients were of primigravida.

Zhao R et al estimated the association between uterine fibroids and adverse obstetric outcomes. This was a retrospective cross-sectional study of 112,403 deliveries from 14 provinces and 39 different hospitals. They compared pregnancy outcomes in women with and without uterine fibroids who underwent detailed second trimester obstetric ultrasonography during 18 to 22 weeks. Of 112,403 women who underwent routine obstetric survey, 3,012 (2.68%) women were identified with at least 1 fibroid. By univariate and multivariate analyses, the presence of uterine fibroids was significantly associated with caesarean delivery (Adjusted odds ratio [AOR] 1.8, 95% confidence interval [CI] 1.7–2.0), breech presentation (AOR 1.3, 95% CI 1.2–1.5) and postpartum hemorrhage (AOR 1.2, 95% CI 1.1–1.4). The size of uterine fibroids and location in uterus had important effect on the mode of delivery. The rates of PPH were significantly higher with increasing size of the uterine fibroid ($P < 0.001$). And the location of fibroid (intramural, submucosal or subserosal) also have a statistically significant impact on the risk of PPH (5.6% [subserosal] vs 4.7% [submucosal] vs 8.6% [intramural]). Pregnant women with uterine fibroids are at increased risk for caesarean delivery, breech presentation and postpartum hemorrhage. And different characteristics of uterine fibroids affect obstetric outcomes through different ways.¹⁰

In the present study, Caesarean section was found in 82.06 percent of the patients while spontaneous vaginal delivery occurred in 15.38 percent of the patients. Pain abdomen was found to be present in 20.51 percent of the patients, while spontaneous miscarriage occurred in 5.13 percent of the patients. Postpartum occurred in 7.69 percent of the patients while threatened preterm labor occurred in 5.13 percent of the patients. Radhika BH et al presented the clinical, obstetric data, perinatal outcomes of 15 patients from a prospective study. Fifteen pregnant women with fibroid > 3 cm were prospectively included in study. Major proportion of patient with fibroids was in younger age group of 25–30 years when compared to older age group of 31–35 years (66% vs 33%). Fibroids were more frequent in multigravidae, compared to primigravidae. In almost half of patients, (53.3%) fibroids were diagnosed before pregnancy. Common complications encountered during pregnancy in decreasing order of frequency were pain abdomen (46.6%), followed by threatened preterm labour (26.6%) and anaemia (26.6%). Out of 15, three (20%) women had abortion. In remaining, 11/12 patients attained term pregnancy between 37 to 40 weeks. Two patients required antenatal myomectomy. Caesarean section was done in 75% of women who attained term pregnancy and one patient had technical difficulty during caesarean section. Post-partum haemorrhage was seen in 5/15 (33.3%) of patients. Out of 12, five babies were low birth weight. Four babies required NICU admission. There was no perinatal mortality. In their small patient series high incidence of caesarean section rates and increased incidence of threatened preterm labour, anaemia, and postpartum haemorrhage, was observed in pregnant patients with fibroids and hence, the pregnancy with fibroids should be considered as high-risk pregnancy.¹¹

Approximately 10% to 30% of women with uterine fibroids develop complications during pregnancy. However, these adverse pregnancy outcomes have been reported in incomplete settings with selection bias, small and differing populations, varying inclusion criteria, low occurrence of adverse outcomes, and inadequate confounding variables. As a result, various studies have reported inconsistent relationships between fibroids and adverse obstetric outcomes. Although decreased uterine distensibility or mechanical obstruction may explain some adverse outcomes, the precise mechanism by which uterine fibroids induce obstetric complications is not clear.^{9–11}

CONCLUSION

From the above results, the authors concluded that in patients with fibroid uterus, pregnancy is often associated with complications which need frequent follow-up and evaluation. However, further studies are recommended.

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