

## Outcome of pregnancies with fibroids and its associated Complications

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Received: 23-07-2020 / Revised: 01-08-2020 / Accepted: 20-08-2020

### Abstract

**Aim:** To assess the outcome of pregnancies with fibroids and associated complications. **Materials and Methods:** The present clinical study was conducted in the Department of Obstetrics and Gynecology during March 2019 to January 2020 at Shri Krishna Medical College and Hospital Muzaffarpur, Bihar, India. 112 cases were found to be eligible for inclusion in the study. **Results:** Mean age of the subjects were 27.24 years out of which 33.9% patients were primigravida and 66.1% were multigravida. 69.6% patients reported single fibroid and 30.1% reported multiple fibroids. 27 (24.1%) had spontaneous abortion. **Conclusion:** Fibroids were observed to be responsible for high incidence of complications throughout pregnancy and during the postpartum period.

**Keywords:** Maternal outcome, Fibroid, Spontaneous abortion, Gravidity

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### Introduction

Myomas are the most frequently recorded benign smooth muscle tumor of the uterus, affecting 20%–60% of women of reproductive age[1]. At present, although there are a lot of research about the prevention and treatment of uterine fibroids the etiopathogenesis of uterine fibroids is still unclear. The incidence of fibroids in pregnancy reported ranges from 0.1 to 10.7% of all pregnancies and increases as the female chooses to postpone pregnancy later on[2]. It was found that 10%–40% of prepartum complications which happened in pregnancy with fibroid have been associated with the presence of it[3]. Also, they are related to a lot of ante-, intra-, and postpartum complications[4]. There are conflicting data on the relationship between obstetric outcomes and uterine fibroids, and the mechanism by which fibroids influence obstetric outcomes is unclear. Some studies have shown a relationship between uterine fibroids and pregnancy complications, such as preterm birth, premature rupture of membranes (PROM), fetal

malpresentation, placental abruption and intrauterine fetal demise[5-7]. In addition, uterine fibroids have been linked to labor dystocia, puerperal infection, operative vaginal delivery, cesarean delivery and postpartum hemorrhage (PPH)[8]. In contrast; other studies have reported no increased risks for these adverse obstetric outcomes with uterine fibroids[9]. The effect of uterine fibroids on fecundity and pregnancy outcome is difficult to determine with any degree of accuracy. This is due in large part, to lack of adequate knowledge about prevalence of fibroid in pregnancy and overestimates the complications attributed to them. In contrast to popular opinion, most fibroids do not exhibit a significant change in volume during pregnancy, although those that do increase in size tend to do so primarily in the first trimester. Although most pregnancies are unaffected by the presence of fibroids, large submucosal and retroplacental fibroids seem to impart a greater risk for complications, including pain (degeneration), vaginal bleeding, placental abruption, intrauterine growth retardation (IUGR), and preterm labour[10].

Submucosal fibroid is one of the most recognised causes of infertility and habitual abortion. In one study, uterine peristaltic movements were partly interrupted by submucosal fibroids, but not by myometrial or subserosal fibroids. These findings are considered to represent dysfunctional contractility, and may be related with pregnancy loss[11]. Uterine fibroids 5 Cm

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or larger are independently associated with caesarean 3. delivery performed before labour, and the risk increases with the size of the fibroid[12].Hence the present study was conducted with the aim to assess the outcome of pregnancies with fibroids and any associated complications.

### Materials and Methods

The present clinical study was conducted in the Department of Obstetrics and Gynecology during March 2019 to January 2020 at Shri Krishna Medical College and Hospital, Muzaffarpur, Bihar, India

### Inclusion Criteria

1. Those who have provided the informed consent
2. Singleton pregnancy
3. Gestational age between 24 -42 weeks
4. Patients with fibroid of  $\geq 2$  cm were included in the study

### Exclusion Criteria

1. Women with pathological conditions (chronic hypertension, gestational diabetes or pre-existing diabetes mellitus, uterine anomalies or fetal malformations).
2. Multiple-pregnancy

### Results

3. Patients who have not signed the informed consent

### Ethical approval and Informed consent

The study protocol was reviewed by the Ethical Committee of the Hospital and granted ethical clearance. After explaining the purpose and details of the study, a written informed consent was obtained.

### Data collection

Maternal demographic characteristics, medical and obstetrical history and pregnancy outcomes were collected from the Medical Record Viewer database of Hospital along with manual retrieval from medical charts and labor records using standardized data collection forms. Of the 588 women who delivered during the study period, 110 patients met the inclusion criteria.

### Statistical analysis

The recorded data was compiled and entered in a spreadsheet computer program (Microsoft Excel 2010) and then exported to the data editor page of SPSS version 19 (SPSS Inc., Chicago, Illinois, USA). Descriptive statistics included computation of percentages and means.

**Table 1: Demographic and clinical profile of the study population**

Age	27.24±5.26
BMI	26.19±4.39
<b>Gravida</b>	
Primigravida	37 (33.6%)
Multigravida	73 (66.4%)
<b>Type of Conception</b>	
Spontaneous	58 (52.8%)
Assisted	52 (47.2%)
<b>Number of Fibroids</b>	
Single	77 (70.0%)
Multiple	33 (30.0%)

**Table 2: Antenatal and postnatal maternal outcome**

Outcome	N (%)
Threatened Miscarriage	16 (14.5%)
Preterm Labor	13 (11.8%)
Placenta Previa	3 (2.7%)
Postpartum hemorrhage	2 (1.79%)

Spontaneous abortion	26 (23.6%)
Premature delivery	16 (14.5%)
Cesarean sections	40 (36.4%)

**Table 3: Fetal Outcome**

Outcome	
Fetal Weight (Kgs)	2.71±0.76
NICU stay (Days)	2.31±1.39
Congenital anomaly	1 (0.91%)

**Discussion**

Fibroids (leiomyoma, myoma) are an important health care concern because they are the most frequent indication for the performance of hysterectomy, accounting of nearly 2, 40, 000 such procedures in the United States [13]. The effect of uterine fibroids on fecundity and pregnancy outcome is difficult to determine with any degree of accuracy, this is due in large part to the lack of adequate large clinical trials[14]. Pregnancy along with a fibroid is a high risk pregnancy, which may lead to complications with unequal gravity although it is the commonest tumour of the reproductive age group. The potential effects of these tumours on pregnancy and that of pregnancy on the tumours are frequent clinical concerns since fibroids are commonly detected in women of reproductive age[15]. Mean maternal age in our study was found to be 27.24 years, which is comparable to other studies, showing occurrence of leiomyomas in second and third decades of life[16,17]. In the present investigation 33.4% patients were primigravida and 66.4% were multigravida. We found that fibroids were less frequent in first pregnancy compared to multigravida. This is in consistent with earlier studies conducted by Noor et al[17].and Sarwar et al[16]. Regarding obstetric complications, in our study 26 (23.6%) had spontaneous abortion. The proposed mechanism is compressed endometrial vascular supply, affects the fetus adversely resulting in abortion[16]. In the present investigation 70.0% patients reported single fibroid and 30.0% reported

multiple fibroids. Lam et al[18] reported a higher rate of preterm delivery among patients with multiple fibroids compared with those with a single fibroid. Likewise, Ciavattini et al[7] monitored raised preterm delivery, cesarean delivery, and breech presentation rates among individuals with multiple fibroids compared with single fibroids or no fibroids. However, Lai et al[9] recorded no relationship between preterm

delivery and fibroid number. In our study, cesarean section was reported among 36.4% of the subjects. Similarly in various studies, the rate of cesarean section ranges 34%-73%. Klatsky et al. 2008 recorded that women with fibroids were at a 3.7-fold increased risk of cesarean delivery.<sup>19</sup> Our study had limitations of being just an observational one not having a comparing group, the sample size was small, and some popular concepts could have resulted in a high caesarean delivery rate.

**Conclusion**

Most of the fibroids are asymptomatic but may adversely affect the path of pregnancy and labor dependent on their location and size. The present study revealed that fibroids were found to be responsible for high incidence of complications throughout antepartum, intrapartum, and postpartum period. So, they have to be carefully screened in the antenatal period through regular follow-up.

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**Source of Support: Nil**

**Conflict of Interest: Nil**