



ORIGINAL ARTICLE

## Fetomaternal outcome in pregnant patients with fibroids at a tertiary care hospital.

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**ABSTRACT... Objective:** To determine frequency of adverse pregnancy outcomes in patients presenting with uterine fibroids at a tertiary care hospital. **Study Design:** Descriptive Cross Sectional. **Setting:** Department of Obstetrics and Gynecology, Independent Medical Collage, Faisalabad. **Period:** January 2021 to December 2022. **Material & Methods:** A descriptive cross sectional study was performed over a period of two year from January 2021 to December 2022 at Obstetrics and Gynecology department of Independent University Hospital, Faisalabad. **Results:** Among total 48 patients of our study 7 patients were aged <20 while 18 were between 20 to 30 years of age and 23 were in 30 to 40 yr age group. Out of 48 patients, 27 were primigravidas, 18 patients were in G2 to G4 group and 10 were >G4. Among 48 patients, 8 had body mass index <25 kg/m<sup>2</sup>. 12 patients had BMI between 26-30kg/m<sup>2</sup> and 28 patients had BMI >30kg/m<sup>2</sup>. 7 patients had symptoms <6 months. 14 patients had symptoms for more than 6 months but less than 1 yr while 27 patients had symptoms >1 yr. In our study, 6 patients has spontaneous miscarriages. In our study 9 patients had preterm birth and 22 patients needed caesarean section and 10 patients had PPH. **Conclusion:** Pregnancy in patients with fibroids, should be considered as high risk, as it is associated with adverse pregnancy outcome. So pregnancy has to be cautiously reserved in the antenatal period, through regular follow up, to detect any obstetric complications and so improve the outcome.

**Key words:** Caesarean Section, Fibroid, Feto Maternal Outcome.

### INTRODUCTION

Uterine anatomy and uterine fibroids have been classically considered as almost a unique issue in gynaecology and reproductive medicine. Fibroids originate from uterine smooth muscles and are highly prevalent in reproductive aged females. Majority of these patients are diagnosed between age 25 and 55.<sup>1</sup>

The leiomyomas are categorized primarily in four types depending on their location in uterus; sub mucous, sub serosal, intramural and pedunculated ones.

Obstetricians are concerned regarding diagnosis of fibroids Uterine myomas are the most frequently recorded benign smooth muscle tumor of the uterus, affecting 20-60% of women of reproductive age and consequently, affects fertility and course and outcome of pregnancy.<sup>2</sup>

During pregnancy owing not only to health threat to mother but risk to fetus also. Fibroids have been associated with adverse pregnancy outcome and pregnancy may increase disease morbidity.

The precise etiology of fibroids is yet unknown, even though they are extremely common. Many clinician face difficulty in diagnosing fibroids during pregnancy because diagnosis is neither simple nor straightforward.

Large fibroids >5cm may be detected on physical examination however smaller one <3.5 cm may not be diagnosed. The ability of ultrasound to detect fibroids in pregnancy is even more restricted owing to difficulty in differentiating physiologic thickening of myometrium from fibroids.<sup>3</sup>

The majority of fibroids do not change their size

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during pregnancy, but one third may grow in the first trimester. Although the data is conflicting and most women with fibroids have uneventful pregnancies, the weight of evidence suggests that uterine fibroids are associated with an increased rate of spontaneous miscarriage, preterm labour, placental abruption, malpresentation, labour dystocia, caesarean delivery and post partum haemorrhage.<sup>4</sup>

Our main issue of consideration; about fibroid uterine is symptomatology not only in terms of clinical features but also in terms of discomfort. Many fibroids do not change their morphology during course of pregnancy, but few of them (about one third) may grow in first trimester.

Certain factors which determine morbidity during pregnancy include size, number and location of fibroid and their relationship to placenta.<sup>5</sup>

The prevalence of fibroid during pregnancy is 2%, however it may range from 0.1-12.5%. Prevalence is different in various ethnic populations. In African America women is 18% and 8% in Caucasian women.<sup>6</sup>

It is important to note that fibroid was held responsible for all complication that occurred in presence of fibroid. The major problem is determined by location of fibroid and its relationship with placenta.<sup>7</sup>

Among all fibroids, the sub mucous one is strongly associated with poor pregnancy outcome and lower rate of ongoing pregnancy. Sub mucous fibroids distort the endometrial integrity; hamper endometrial vascularization and causes endometrial inflammation. All these factors lead to poor implantation and placentation, which in turn adversely affect the index pregnancy.<sup>8</sup>

Pregnancies with concomitant fibroid uteri has been a topic of interest for obstetricians all over the world, however, unfortunately, we lack these studies in Pakistan. Our aim of research was to study effects of fibroids in pregnancy in our local population. Some research has been done in other cities of country but no previous study

was carried out in Faisalabad so we have studied fetomaternal outcome in pregnancies with fibroid at a tertiary care hospital so that pregnancies complicated with presence of fibroids can be managed more carefully to prevent adverse effects in general population.

## **OBJECTIVES**

To determine frequency of adverse pregnancy outcomes in patients presenting with uterine fibroids at a tertiary care hospital.

## **MATERIAL & METHODS**

A descriptive cross sectional study was performed over a period of two year from January 2021 to December 2022 at Obstetrics and Gynecology department of Independent University Hospital, Faisalabad.

### **Inclusion Criteria**

All pregnant patients with fibroids between 18 to 40 yrs of age visiting Independent University Hospital Faisalabad.

### **Exclusion Criteria**

Patients with co-existing adenexal pathologies.  
Patients with previous history of uterine surgery.  
Patients having other obstetrical co morbidities like PIH, gestational diabetes etc.

After having permission from hospital ethical committee (approval number 000041), 48 pregnant patients with fibroids who fulfilled inclusion criteria were selected for study.

Written informed consent was taken from patients, detailed history was taken and patients were examined thoroughly and basic demographic data was collected to assess age, parity, BMI and duration of pregnancy. Routine fundamental investigations were carried out for all. Their antenatal period was followed both clinically and scanned by Ultrasound. Pregnancy outcomes were assessed as spontaneous miscarriage, pre-term labour, Abruption Placentae, Malpresentation, caesarean delivery and postpartum Haemorrhage.

Data was analyzed with SPSS version 22. Quantitative data like age and BMI were analyzed

by mean and standard deviation while qualitative data like preterm labour was analyzed by frequency and percentage.

## RESULTS

Among total 48 patients of our study 7 patients were aged <20 while 18 were between 20 to 30 years of age and 23 were in 30 to 40 yr age group. (Table-I)

Out of 48 patients, 27 were primigravidas, 18 patients were in G2 to G4 group and 10 were >G4. (Table-II)

Among 48 patients, 8 had body mass index <25 kg/m<sup>2</sup>. 12 patients had BMI between 26-30kg/m<sup>2</sup> and 28 patients had BMI >30kg/m<sup>2</sup>. (Table-III)

7 patients had symptoms <6 months. 14 patients had symptoms for more than 6 months but less than 1 yr while 27 patients had symptoms > 1 yr. (Table-IV)

In our study, 6 patients has spontaneous miscarriages. In our study 9 patients had preterm birth and 22 patients needed caesarean section and 10 patients had PPH. (Table-V)

Age	No. of Patients (%)
<20	7 (14.5%)
21-30	18 (37%)
31-40	23 (47%)

**Table-I. Distribution of patients according to age n=48**

Parity	No. of Patients (%)
Primigravida	27 (56%)
G2-G4	11 (22%)
>G4	10 (20%)

**Table-II. Distribution of patient according to Parity n=48**

Age	No. of Patients (%)
<25	8 (16%)
26-30	12 (25%)
>30	28 (58%)

**Table-III. Distribution of patient according to BMI n=48**

Duration of Symptoms	No. of Patients (%)
<6 months	7 (14%)
6 months to 1 year	14 (29%)
>1 year	27 (56%)

**Table-IV. Distribution of patient according to Duration of symptoms n=48**

	No of Patients (%)
Spontaneous miscarriage	6 (13%)
Preterm labour	9 (18%)
Placental abruption	5 (11%)
Malpresentation	
Cesarean delivery	22 (45%)
Post partum haemorrhage	6 (12%)

**Table-V. Distribution of patients according to n=48**

## DISCUSSION

Uterine fibroids are a prevalent problem which has different types of effects on quality of life of patients. It involves large social and personal cost. We determined the prevalence clinical presentation and fetomaternal outcome in Independent University Hospital which is a 500 bedded tertiary care hospital and caters a large population in this area.

Most patients in our study had age between 21-30 yrs. This result supported the effect of hormones in growth of fibroids during reproductive age group. Javed et al from Lahore also reported uterine fibroids in same age group.<sup>9</sup>

One study in India showed mean age of 28.9 years in pregnant patients with fibroids.<sup>10</sup> Most patients in our study were having increased BMI. i.e 28 patients had BMI >30 kg/m<sup>2</sup> and 8 patients had BMI <25 kg/m<sup>2</sup>. and 12 patients had BMI between 26-30kg/m<sup>2</sup>. Shavell at reported BMI to be 34.2 kg/m<sup>2</sup> in pregnant patients having fibroids.<sup>11</sup> Another study from Peshawar showed similar results.<sup>12</sup>

Many fibroids rapidly increase in size during course of pregnancy; it is due to effect of hormone stimulation and increased blood flow. However, few studies suggest that they remain unchanged most of time or even may increase slightly in size.

Most patients in our study were primiparous 27. It is in consistency with a study Common where patients with fibroid during pregnancy were

primigravida. The protective effect of multiparity in uterine leiomyoma has been reported previously. It is due to effect of uterine involution. On there is remodeling of uterine smooth muscle.

In our study, 18 patients (10%) had pregnancy loss. In one study, spontaneous miscarriage rate were 14%.<sup>13</sup>

The mechanism by which fibroids cause spontaneous abortion is not clear yet. Multiple postulations have been made including compressive effect of fibroids, decreased blood supply to fetus and placenta and increased uterine contractility and irritability.

Multiple fibroids may increase the abortion rate as compared to simple fibroid.

Pregnant female with fibroids are likely to develop preterm labour. In our study 9 patients (18%) delivered before 37 weeks. In one study 16% patients with fibroids had preterm labour.<sup>14</sup>

Having stated that pregnant females with fibroids are at more risk of developing preterm labour and to deliver before term as compared to pregnant patients with no fibroids.

Noor et al, from Peshawar also showed that fibroids were associated with many obstetric complications of which preterm labour was significant.

Civattini et al, stated preterm labour was more common in patients with uterine fibroids.<sup>15</sup> In one study, association of preterm labour with fibroid was 21%.<sup>16</sup>

The reason behind preterm labour in patients with fibroid is distortion of shape of uterine cavity. As the baby grows and uterine engagement occurs, the myometrium with fibroids is stretched and it can induce preterm labour and in turn preterm birth.

Although results are conflicting a Meta analysis stated a significant association with abruption placentae.<sup>17</sup>

On study however, did not show any significant association. Myoma may cause distortia or interference with uteroplacental perfusion at placental bed, however, it mainly occurs when large fibroid is present at uteroplacental site.

In our study 6 patients (12%) had excessive blood loss after delivery. In another study, PPH was noted 20% patients.<sup>18</sup> Fibroids cause distortion of uterine architecture and may hamper myometrial contractions which in turn cause atony of uterus and consequently postpartum haemorrhage. Also, presence of large fibroid increases surface area exposing more vessels which plays major contributory role in causing PPH. Data from many other studies also shows PPH is more likely in women with fibroids as compared to control subjects 2.5% vs 1.4%.

The risk of cesarean section is more than two fold in patients with fibroids.<sup>19</sup>

Multiple fibroids or single large fibroid increase the risk of abdominal delivery. In our study 22 (45%) of patients needed cesarean section while in another study association of cesarean section with fibroid during pregnancy was 59%.<sup>20</sup>

Fibroids cause distortion of uterine cavity resulting in malpresentations leading to increased number of caesarean sections. Also fibroids cause dysfunctional uterine activity during labour which leads to prolonged labour and caesarean sections.

## CONCLUSION

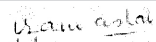



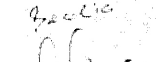
To conclude, pregnant patients with fibroids should be considered as high risk group owing to adverse outcome due to fibroids. The weight of evidence in literature suggest that they are associated with high chances of a number of obstetrical problem. So all attending clinicians should anticipate these complications. Patients should be encouraged for regular antenatal visits for early diagnosis and appropriate management so that adverse fetomaternal outcome should be avoided.

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### AUTHORSHIP AND CONTRIBUTION DECLARATION

No.	Author(s) Full Name	Contribution to the paper	Author(s) Signature
1	Iram Aslam	Main author.	
2	Nadia Sharif	Data collection.	
3	Saima Qureshi	Data analysis.	
4	Uzma Manzoor	Introduction write up.	
5	Saadia Bano	Compilation of results .	
6	Uzma Shahzad	Proof reading.	