

# OUTCOME OF PREGNANCIES ASSOCIATED WITH FIBROIDS

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## ABSTRACT

**Objective:** To determine the complications of pregnancy and labour associated with uterine fibroids.

**Material and Methods:** This study was conducted in Obstetrics and Gynaecology Unit B of Khyber Teaching Hospital, Peshawar from April 2007 to May 2009. The study group consisted of 30 patients with fibroid uterus and control group comprised of hundred randomly selected pregnant women with a normal uterus. Pregnancy outcome in terms of age, parity, mode of delivery and location of fibroid was noted. Any complication occurring during the course of pregnancy and labour was also taken into account.

**Results:** Majority of women in the two groups belonged to the age group between 25 to 35 years. Women in the study group were nulliparous as compared to control group (56.2% vs 12%). The complication of pre-labour rupture of membranes (PROM), preterm labour, abruption, placenta praevia were not statistically different in the two groups. Post-partum hemorrhage and need for blood transfusion were greater in the study group. The abortion rate was twice than the controls (12.5% vs 6%). The rate of Caesarian Section (C/S) was also higher among women with uterine fibroids (53.3% vs 23%).

**Conclusion:** The presence of fibroid uterus leads to increased risk of complications during pregnancy and labour. Hence, these pregnancies should be regarded as high risk and dealt with in specialized units of obstetric care.

**Key Words:** Leiomyoma, Fibroids, Uterine, Pregnancy, Complications, Outcome.

## INTRODUCTION

Uterine fibroids (or leiomyomas) are the most common benign pelvic tumours in women<sup>1</sup>. They are the fifth leading cause of gynaecological conditions in women of reproductive age group<sup>2</sup>. Pathological examination of the uterus shows that approximately 77% of women of reproductive age have uterine fibroids; however only 20-25% of these women are symptomatic<sup>3</sup>. Frequency in reproductive age group is 34.2%<sup>4</sup>. Despite their prevalence, the disease has remained poorly understood, with the incidence, natural history and progression incompletely known<sup>5</sup>, because routine ultrasound screening for myomas is not indicated<sup>6</sup>, the exact incidence of fibroids during pregnancy is not known. The reported rates vary from as low as 0.1% of all the pregnancies to higher rates of 12.5%<sup>7</sup>.

When a lady becomes pregnant with fibroids, it poses a threat to the obstetrician. Antenatal period is usually risky as they grow under the effect of hormones of pregnancy<sup>8</sup>. According to an estimation, they can complicate one in ten pregnancies<sup>9</sup>. However, several studies show a protective effect of pregnancy on the development of fibroids<sup>10</sup> with parity decreasing the

risk up to five folds<sup>11</sup>. They are responsible for 2 to 3% of all infertility cases<sup>12</sup>. The location of uterine fibroids influence the reproductive function<sup>13</sup>. Literature suggests that only those myomas that distort the endometrial cavity, impair fertility<sup>14</sup>.

Fibroids during the first trimester are associated with an elevated risk of miscarriage. The risk of spontaneous pregnancy loss is higher in patients with multiple fibroids than with a single fibroid. Later on the risks of premature rupture of membranes (PROM), pre-term labour, redness or carneous degeneration<sup>15</sup>, abruption, malpresentation, intra-uterine growth restriction (IUGR), retained placenta and post partum haemorrhage (PPH) is increased<sup>16</sup>. The rate of caesarean section is also higher in patients with fibroids<sup>17</sup>.

This study was carried to find out the outcome of pregnancy associated with uterine fibroids and to stress upon the fact that every pregnant lady should be screened for Uterine fibroids (UF). If the fibroids are diagnosed along with pregnancy, these patients need vigilant antenatal care and the pregnancy should be treated as high risk pregnancy.

## MATERIAL AND METHODS

This study was conducted in Obstetrics and Gynaecology Unit B of Khyber Teaching Hospital, Peshawar from April 2007 to May 2009. It was a prospective comparative study. In the study group 30 patients were included who had singleton pregnancy

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associated with fibroid uterus but with no other risk factor. Sample size was calculated keeping prevalence of 34.2%, with precision value of 0.5. Confounding factors were controlled by excluding patients with polyhydramnios, previous C/S, medical disorders, cephalopelvic disproportion (CPD), previous myomectomy and congenitally malformed baby.

The control group consisted of hundred randomly selected pregnant women having normal uterus on ultrasound. The same exclusion criteria was applied as in the study group. Diagnosis of uterine fibroids was made on careful history, examination and ultrasonography (U/S). Pregnancy outcome in terms of normal vaginal delivery (NVD), instrumental delivery and C/S was noted. Any complication occurring during the course of pregnancy and labour was also taken into account. Data was collected via a proforma and the percentages of the two groups were compared.

## RESULTS

A total of 30 patients were studied. All of them were either admitted through antenatal clinic or presented directly to labour room. Thirty percent patients were booked and 21 (70%) came in emergency with no previous antenatal care. Patients' age ranged from 25 to 37 years with Mean of  $30.37 \pm 3.19$  SD. Parity of the patients ranged from 0 to 8 months with Mean  $1.67 \pm 2.62$  SD. Gravidity ranged from 1 to 10 with Mean of  $2.87 \pm 2.78$  SD. Period of gestation ranged from 20 to

**Table 1: Indications for Caesarean section**

Indication	Study group (n=16)	Control group (n=23)
Breech presentation	5 (31%)	3 (13%)
Dysfunctional labour	5 (31%)	2 (8.69%)
Fetal distress	2 (12%)	6 (26.08%)
Placenta praevia	1 (6.2%)	2 (26.08%)
elective	3 (18.7%)	—
others	—	10 (43.47%)

**Table 2: Complications**

Complications	Study group (n=30)	Control group (n=100)
Abdominal pain	2 (6.75%)	6 (6%)
Abortions	4 (13.3%)	6 (6%)
PROM	3 (10%)	10 (10%)
Pre-term labour	3 (10%)	8 (8%)
IUGR	1 (3.3%)	1 (1%)
Placenta praevia	1 (3.3%)	8 (8%)
PPH	7 (23.3%)	12 (12%)

**Table 3: Parity Distribution**

Parity in months	Study group (n=32)	Control group (n=100)
Nulliparous	16 (53.3%)	12 (12%)
1-4	6 (20%)	60 (60%)
5 or more	8 (26.6%)	28 (28%)

41 weeks with Mean of  $36.70 \pm 4.28$  SD. Table 1 shows indications for C/S.

The difference in the mean maternal age among patients and controls were not significant i.e 30.9 years vs 39.5 years. However, 56.25% of the patients in the study group were nulliparous as compared to 12% in the control population. Fibroids were positioned in the lower uterine segment in 23% of the cases and were in contact with the placenta in 9.3% of the cases.

Table 2 displays the pregnancy complications. No significant differences in the incidence of preterm deliveries, IUGR, abruption and placenta praevia were noted. However the incidence of abortion (12.5% vs 6%) and PPH (23.3% vs 12%) was almost twice the rate in women with normal uteri. The rate of c/section was higher in patients with fibroids than in patients without fibroids (53.3% vs 23%). The parity distribution is shown in Table 3.

## DISCUSSION

The results of this study support the conclusions of previous authors that the presence of myoma during pregnancy is potentially a serious problem, though in some cases, it does not affect the outcome of pregnancy<sup>18</sup>. Ten out of 30 patients delivered vaginally, making 33.3%. This compares favourably with Rehman A et al<sup>19</sup> (40%) and Noor J et al (40.8%)<sup>20</sup>. (66.7%) of the patients underwent C/S, which simulates with the results of Coronado GD et al<sup>21</sup>.

Parity of the patients ranged from 0 — 8 with Mean of  $1.67 \pm 2.62$  SD. The association of fibroids with nulliparity in this study (63.3%) is in agreement with that of Kokab H et al<sup>22</sup> (56.25%), though it is not clarified whether the fibroids are a cause or consequence of low family size.

Uterine leiomyomas also might decrease uterine distensibility or present with mechanical obstructions that restrict space, limit fetal movement, or lessen the force of contractions. The reduced risk of precipitous labour among women with uterine leiomyomas support the hypothesis that uterine leiomyomas interferes with uterine contractions<sup>23</sup>. The same is supported in this study where not even a single case of precipitous labour was noticed.

The incidence of miscarriage was 6.7% in this study whereas, Rehman A et al reported 12%<sup>19</sup>, Kokab H et al<sup>22</sup> reported 12.5% and Kore S et al showed 22%<sup>18</sup>. This discrepancy might be due to poor antenatal care, decreased awareness and decreased trend of

presenting to hospital after expulsion at home, in our setup. All these factors can lead to missed diagnosis of miscarriage due to fibroids.

As a result of uterine enlargement, nutrient arteries supplying the fibroid become twisted and stretched causing carneous or red degeneration of fibroids during pregnancy. Thirteen percent of the patients presented with acute abdominal pain in this study. Reports from different studies vary in this regard e.g. Kokab H et al<sup>22</sup> shows 6.25% while Rehman A et al<sup>19</sup> reports 24%.

The frequency of further complications i.e. PROM (16.7%), preterm labour (10%), IUGR (16.7%), abruption (6.7%), placenta praevia (13.3%), breech presentation (13.35), unstable lie (6.7%), foetal distress (43.3%), PPH (36.6%), prolong and poor progress of labour (56.6%) all can be favourably compared with the results of studies<sup>21,22</sup>.

As mentioned previously, 66.7% of the patients delivered via C/S. The most common indication in this study remained foetal distress with obstructed labour (61%). Similar results have been quoted by Coronado GD et al 2000<sup>21</sup>. In nutshell, in some cases, though fibroids may have no effect on labour, however, they pose a significant risk to pregnancy and labour in the form of malpositions of the foetus, delayed progress and mechanical obstruction, as well as PPH and delayed involution of the uterus — increasing liability to septicemia, in vast majority of the cases<sup>23</sup>.

## CONCLUSION

Awareness should be created among general practitioners, in hospitals, antenatal clinics and the opinion makers in the society e.g. elderly women, husbands etc. regarding regular antenatal care. Postnatal follow up is also mandatory to ensure safe recovery during puerperium and further management.

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