

## Original Article

# Evaluate the Maternal and Fetal Outcome in Women having Pregnancy with Fibroids

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## Abstract

**Objective:** To evaluate the maternal and fetal outcome in women having a pregnancy with fibroids.

**Methodology:** This prospective/descriptive study was conducted in the department of obstetrics and gynaecology of Abbas Institute of Medical Sciences Teaching Hospital of Azad Jammu Kashmir Medical College, Muzaffarabad, Azad Kashmir from December 2016 to June 2018. Non-probability purposive sampling was done. All detailed data such as demographic data, mode of delivery, obstetrical history, maternal complications, and fetal outcome was collected on pre-designed proforma. Mean and standard deviation were collected for age, period of gestation. Data was analyzed on the computer program SPSS17. Ethical approval for this article has been obtained from hospital ethical committee.

**Results:** Eighty patients were included in this study who had pregnancy with fibroid. Vaginal deliveries were achieved in 36 (45%) patients. Twenty three (29%) out of 80 patients had caesarean section and 21 (26%) patients had a miscarriage, while 14 (18%) had antepartum and 21 (26%) had postpartum hemorrhage. Ultrasonography was done for the confirmation of fibroid, its size and position were measured and recorded in predesigned proforma. Results of ultrasound showed that 35 patients had submucosal, 45 patients had multiple and large fibroids. 34 (43%) patients delivered healthy babies, 21 (26%) had miscarriage, 18 (23%) babies were admitted to the neonatal intensive care unit but discharged satisfactorily later on. There were 4 (5%) intrauterine deaths and 3 (4%) early neonatal death.

**Conclusion:** Miscarriage and postpartum haemorrhage were common in patients having a pregnancy with fibroid.

**Key Words:** Fibroid, maternal complications, fetal outcome.

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## Introduction

Uterine fibroids are the most common benign tumors in women, occurring in approximately 20% to 30% of women of reproductive age.<sup>1</sup> They are therefore common in pregnancy. The incidence of fibroids during pregnancy is, however unknown, but reported rates in different studies showed as low as 0.1% of all pregnancies to as high as 12.5%.<sup>2</sup> They are more common in blacks as compared to Caucasians.<sup>3</sup>

Review of literature showed that the different complications occurring in pregnancy with fibroids included antepartum haemorrhage, acute abdomen, pre-term labour, dysfunctional labour, retained placenta and retained product of conception<sup>4</sup>. Although abortions, pre-term delivery, dysfunctional labour and caesarean sections were common, the neonatal outcome in viable pregnancies was reasonably good in women with uterine fibroids.<sup>5</sup>

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Because of increased risk of complications all the patients with fibroid having pregnancy should be considered as high risk pregnancy.<sup>6</sup>

The effect of uterine fibroids on pregnancy outcome is difficult to determine with any degree of accuracy. This is due, in large part, to the lack of adequate 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 some fibroids such as large sub-mucosal and retroplacental fibroids seem to impart a greater risk for complications including (degeneration), vaginal bleeding, placental abruption, IUGR and pre-term labour.<sup>7</sup> Submucosal fibroid is one of the most recognized causes of infertility and habitual abortion. In one study, uterine peristaltic movements were partly interrupted by sub-mucosal fibroids, but not by myometrial or sub serosal fibroids. These findings are considered to represent dysfunctional contractility and may be related with pregnancy loss.<sup>8</sup> Uterine fibroids 5cm or larger are independently associated with caesarean delivery performed before labour, and the risk increases with the size of fibroid.<sup>9</sup>

The purpose of the study is to see maternal and fetal outcomes in pregnancies complicated by uterine fibroids as the clinical data available on the topic is sparse and controversial.

## Methodology

The study was a prospective descriptive type conducted in Abbas Institute of Medical Sciences Teaching Hospital of Azad Jammu Kashmir Medical College, Muzaffarabad, Azad Kashmir, from December 2016 to June 2018. Eighty patients were included in this study by non-probability purposive sampling. All pregnant women with fibroid diagnosed and confirmed by ultrasonography about their size and position were measured and recorded in the proforma. Those pregnancies who were not included in the study were patients planned for caesarean section other than the fibroid, patients with medical problems such as diabetes, cardiac diseases which

could affect the maternal and fetal outcome. Approval taken from the hospital ethical committee and informed written consent was taken from all patients. Mode of delivery, demographic data, obstetric history were recorded on pre-designed proforma. Ultrasonography was done on all patients for the confirmation of fibroid, its size and position.

The available data were analyzed using SPSS17. Mean  $\pm$ SD were calculated for age and period of gestation. Percentages and frequencies were calculated for booking status, mode of delivery, maternal outcome, maternal complications and fetal outcome.

## Results

5600 Patients were admitted during study period, out of which 80 patients were fulfilled the inclusion criteria. Frequencies were calculated for age, booking status, gestation period, obstetric history including abortions, mode of delivery, maternal complications and fetal outcome.

The age of patients ranged from 17-40 years with mean age of 28.55 years. Frequency distribution and mean  $\pm$  SD for different age groups in patient with fibroid uterus is shown in Table I. Frequency distribution and mean  $\pm$  SD of different period of gestation in which patients pregnant with uterine fibroids is shown in Table II. There were 20 patients (17.3%) booked and 60 (80.7%) unbooked.

**Table I: Frequency distribution of patients in different groups (n=80)**

Age Group	Number of patients	%	X	fx
17-20	8	10	18.5	148
21-25	22	27.5	23	506
26-30	18	22.5	28	504
31-35	18	22.5	33	594
36-40	14	17.5	38	532
Total	80	100		2284

**Table II: Frequency distribution and mean  $\pm$  SD of the period of gestation.**

Period of gestation	Number of cases	%	X	fx	fx <sup>2</sup>
6-24wks	20	25	15	300	4500
25-30wks	18	22.5	27.5	495	13612.5
31-36wks	10	12.5	33.5	335	11222.5
37-42wks	32	40	39.5	1264	49928
total	80	100		2394	79263

Out of 80 patients, 10 were primigravida, 40 were multigravida and 30 patients were grandmultiparas. Out of 80 patients, 36 (45%) were delivered vaginally, 23 (29%) had caesarean section and 21 (26%) had a miscarriage.

Outcome	Number of cases	%
NIL	14	18
Miscarriage	21	26
Abdominal pain	2	3
Pre-mature rupture of membranes	8	10
Ante-Partum haemorrhage	14	18
Post-partum haemorrhage	21	25
Total	80	100

Outcome	Number of cases	%
Healthy babies	34	43
Miscarriage	21	26
Intra uterine fetal death	4	5
Early neonatal death	3	4
NICU admission and discharged	18	22

Frequency of maternal complications, 14 (18%) had no complications, 21 (26%) had miscarriage, 2 (3%) patients had abdominal pain, 8 (10%) had premature rupture of membranes, 14 (18%) had antepartum hemorrhage, 21 (25%) had post part hemorrhage as shown in Table III. Ultrasound done on all patient who had fibroid, size and position were measured and recorded in the proforma. 35 patients had sub mucosal and 45 patients had multiple fibroids, size ranging from less than 5cm to more than 10cm. 21 patients had miscarriage and 8 patients had premature rupture of membranes. All of these patients had sub mucosal fibroids. Rest of the 6 patients who had sub mucosal fibroid had no complications. 35 patients had antepartum and postpartum haemorrhage who had multiple and large fibroids. 10 patients who had multiple and large fibroids had other complications. As far as fetal outcome is concerned 34 (43%) patients had healthy babies, 21 (26%) had early fetal loss 4 (5%) had intra-uterine fetal death, 3 (4%) had early neonatal death, 18 (22%) admitted to neonatal intensive care

unit but recovered and discharged home satisfactory as shown in Table IV.

## Discussion

Eighty Patients had fibroid giving an incidence of 1.43%. The reported incidence of pregnancies complicated by myoma is 0.1-4% which composes with our study<sup>10</sup>. Mean maternal age came to be 28.55% years, which is similar to other studies showing presence of fibroids in 3<sup>rd</sup> and 4<sup>th</sup> decades of life<sup>11</sup>.

During pregnancy, uterine fibroid are usually asymptomatic. They may be complicated by miscarriage, pre-term labour, ante partum hemorrhage, caesarean and post part hemorrhage.<sup>12,13</sup> 66(82%)had complications in our study while 14 remained asymptomatic. Other authors have reported upto 70% pregnancies have complications<sup>14</sup>. Our study confirmed the findings of previous study showing that pregnancy rates were higher in women with fibroids<sup>15</sup>. Another study reflected an incidence of 22% for miscarriages due to fibroid<sup>11</sup>. In our study 21 (26%) patients had miscarriage and all of these patients had sub mucosal fibroids of different sizes. 2 (3%) patient had acute abdomen. The cause of pain was most probably degeneration.<sup>15</sup> In our study 14(18%) had ante partum haemorrhage and 21 (26%) had postpartum haemorrhage. These patients had multiple and large fibroids as also seen in another study.<sup>16</sup> The rise of postpartum hemorrhage in pregnancies complicated by fibroids has been reported as 14% in a previous study.<sup>14</sup> 8(10%) patients had premature rupture of membranes and 22 patients had premature labour including 8 patients of premature rupture of membranes. Myoma may distort the shape of uterine cavity which may account for higher rates of preterm birth.<sup>8</sup> As pregnancy advances myometrium having fibroids are over stretched and this mechanism can initiate labour and thus result in increased rate of preterm birth.<sup>17</sup> Pregnant women with fibroid are at increased risk of placenta praevia and malpresentation.<sup>7</sup> Such findings were not observed in our study.

Regarding mode of delivery 36 (45%) had vaginal delivery while 23 (29%) patients underwent caesarean section. Our result compares well with

previously conducted studies showing caesarean section rates of 39% in patients with fibroid compared to 17% for general population.<sup>18,19</sup>

As far as neonatal outcome is concerned 34 (43%) patients delivered healthy babies. Another study showed the good fetal outcome.<sup>20</sup> There were 4(5%) patients who had intra uterine fetal death while 3(4%) patients had an early neonatal death, 18 (23%) babies admitted to neonatal intensive care unit but all were discharged in satisfactory condition.

## Conclusion

Preterm delivery, miscarriage, premature rupture of membranes, antepartum and postpartum hemorrhage are the main complications of pregnancy with fibroids. Patients with fibroid should be treated as a high risk pregnancy.

## References

1. Sparic R, Mirkovic L, Malvasi A. Epidemiology of uterine myomas: A review. *Int J Fertil Steril*. 2016; 9(4):424–435.
2. Vitale SG, Tropea A, Rossetti D, et al. Management of uterine leiomyomas in pregnancy: review of literature. *Updates Surg*. 2013; 65(3):179 – 182.
3. Sei K, Masui K, Sasa H, Furuya K. Size of uterine leiomyoma is a predictor for massive haemorrhage during caesarean delivery. *Euro Journal of Obstet Gynaecol*. 2018; 223 : 60 – 63.
4. Vilos GA, Allaire C, Laberge PY, Leyland N, Vilos AG, Murji A, et al. The management of uterine leiomyomas. *J Obstet Gynaecol Can*. 2015; 37(2) : 157 – 181.
5. Klatsky PC, Tran ND, Caughey AB, Fujimoto VY. Fibroids with reproductive outcomes. *Am J Obstet Gynaecol*. 2008;198(4) : 357 – 366.
6. Benaglia L, Cardelicchio L, Filippi F, Paffoni A, Vercellini P, Somigliana E, et al. The rapid growth of fibroids during early pregnancy *PLoS one*. 2014; 9(1): e85933.
7. Sarwar I, Habib S, Bibi A, Malik N, Parveen Z. Clinical audit of Fetomaternal outcome in pregnancies with fibroid uterus. *J Ayub Med Coll Abbottabad*. 2012;24(1):79 – 82.
8. Nishino M, Togashi K, Nakai A, Hayakawa K, Kanao S, Iwasaku K, et al. Uterine contractions evaluated on the CINE MRI in patients with uterine leiomyomas. *Eur J Radiol*. 2005 ; 53(1) : 142 – 146.
9. Vergani P, Locatelli A, Ghidini A, Andreani M, Sala F, Pezzullo JC. Large uterine leiomyomas and risk of caesarean delivery. *Obstet Gynaecol*. 2007; 109(2): 410 – 414.
10. Lam SJ, Best S, Kumar S. The impact of fibroid characteristics on pregnancy outcome. *Am J Obstet Gynaecol*. 2014;211(4): 395. e1 – 5.
11. Raja KS, Tasleem H. Effects of uterine leiomyomata on the course of pregnancy and labour. *Rawal Med J*. 2009; 34(1):79 – 80.
12. Siregar MFG. When myoma causes infertility. *Journal of Natural Sciences Research*. 2013;3:95 – 105.
13. Ikedife D. Surgical challenge of myomectomy at caesarean section. *Niger J Surg Sci*. 1993;3:15 – 27.
14. Ciavattini A, Clemente N, Delli Carpini G, Di Giuseppe J, Giannubilo SR, Tranquilli AL. Number and size of uterine fibroids and obstetric outcome. *J Matern Fetal Neonatal Med*. 2015 ; 28 : 484 – 488.
15. Nwagha UI, Agu KA, Nwankwo TO, Eglouji CC. Emergency myomectomy during pregnancy. A case report. *Trop J Obstet Gynaecol*. 2005 ; 22(1) : 81 – 82.
16. Shavell VI, Thakur M, Sawant A, Kruger ML, Jones TB, Singh M, et al. Adverse obstetric outcomes associated with sonographically identified large uterine fibroids. *Fertility and sterility*. 2012;97(1):107-110.
17. Exacoutos C, Rosati P. Ultrasound diagnosis of uterine myomas and complications in pregnancy. *Am J Obstet Gynaecol* 1993 ; 82(1) : 881– 882.
18. Lefebvre G, Vilos G, Allaire C, Jeffrey J, Arneja J, Birch C, et al. Clinical Practice Gynaecology Committee, Society for Obstetricians and Gynaecologists of Canada. The management of uterine leiomyomas. *J Obstet Gynaecol Can*. 2003;25(5):396-418.
19. Michels KA, Velez Edwards DR, Baird DD. Uterine leiomyomata and caesarean birth risk: a prospective cohort with standardized imaging. *Ann Epidemiol*. 2014;24:122–126.
20. Dogen S, Ozyuncu O, Atak Z. Fibroid during pregnancy: Effects on pregnancy and neonatal outcomes *J Reprod Med* 2016; 61(1–2): 52 – 57.