

Obstetrics outcomes of pregnancy with uterine fibroids in tertiary care hospital

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ABSTRACT

Aim: To determine the clinical profile and obstetric outcomes among the pregnant women with uterine fibroids. **Methods:** This prospective observational study was carried out over a period of 1 ½ years from July 2018 to Jan 2020. 96 pregnant patients with uterine fibroids were included in the study. Various parameters like maternal age, parity, number and size of fibroids, obstetric complications and mode of delivery were noted. Complete clinical examination and routine investigations were performed at each antenatal visit. Ultrasonography was done during each visit for fetal assessment and to observe the change in the size of the fibroid. **Results:** Out of 96 patients recruited, 85 of them completed the study. The mean age of patients was 32.56 ± 4.3 years, primigravida was 27.05%, multigravida was 72.94%. Spontaneous conception was seen in 75.29% and 24.70% used assisted reproductive treatment for conception. Spontaneous abortion was seen in 11.76%, premature delivery in 18.7%, and full term delivery in 81.3%. Caesarean section was performed in 74.67% of cases and normal vaginal delivery in 25.33%. 12.9% had threatened miscarriage, 18.7% had preterm labour, 5.3% had antepartum bleeding due to placenta previa, 11(14.67%) had postpartum haemorrhage. Intramural location and multiple fibroids were associated with increased risk of caesarian section as compared to sub serosal fibroids and single fibroids. **Conclusions:** Uterine fibroids in pregnancy are associated with higher risk of adverse obstetric complications. Regular check up is advised during antenatal period to detect any adverse obstetric complications, which will help to improve the outcome.

Keywords: Fibroid, abortion, caesarian section, postpartum haemorrhage.

Uterine fibroids are one of the most commonly encountered benign tumours of the female reproductive tract.¹ The prevalence of uterine fibroids are underestimated as most of them are asymptomatic.² The prevalence of uterine fibroids in pregnant woman ranges from 1% to 10.7%.^{3,4} The prevalence of uterine fibroids during pregnancy is increasing as more and more women delay child bearing to later in life and incidence of uterine fibroids increases with age.⁵ Despite increasing incidence, the relationship between uterine fibroids and adverse obstetrics outcomes is not clearly understood. Many studies have

shown that uterine fibroids can be related to lot of pregnancy complications like spontaneous abortion, placental abruption, antepartum haemorrhage, fetal malpresentation, preterm birth, premature rupture of membranes, dysfunctional labor, puerperal infection, increased need of caesarean section and postpartum haemorrhage.⁶⁻¹⁰ The main aim of our study was to assess the impact of uterine fibroids on obstetric outcomes.

Material and methods

This prospective study was carried out in tertiary care hospital over a period of 1 ½ years from July 2018 to

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January 2020. Ninety-six pregnant patients with USG documented uterine fibroid attending antenatal clinic were included in the study. Complete history, clinical examination and routine investigations were recorded during antenatal period. Pregnancy with fibroid was diagnosed by the first trimester scan. Ultrasonography was done at successive antenatal visits for fetal assessment and change in fibroid size or any complication. The following parameters were analysed: maternal age, gravidity, parity, number and size of fibroids, gestational age at delivery, obstetric complications (like preterm birth, malpresentation, prom, placenta previa, placental abruption and LBW), mode of delivery and birth weight of fetus. The patients having history of previous caesarian section, any surgery, uterine malformation or chronic diseases like diabetes, hypertension was excluded from the study. The statistical analysis was done by using SPSS 17 software. P value of < 0.05 was taken as significant.

Results

96 patients having pregnancy with uterine fibroids were included in the study. However only 85 patients' study could be completed as 11 patients were lost on follow up. Single fibroid was seen in 40 (53.3%) patients and multiple was seen in 35(46.7%). Intramural location of fibroid was seen in 46 (61.3%) patients and subserosal was seen in 29(38.7%) patients. The mean age of the patients was 32.6±4.3 years. The number of primigravida were 23(27.05%) and multigravidity was seen in 62 (72.94%) of patients. Spontaneous conception was observed in 62(75.29%) of patients and assisted reproductive treatment was given in 21(24.70%) patients (table 1).

Table 1: Clinical characteristics

Parameters	Mean ±SD	Percentage
Age	32.6±4.3 years	
Gravidity		
Primigravida	23	27.05
Multigravida	62	72.94
Spontaneous conception	64	75.29
Assisted reproductive treatment	21	24.70

Obstetrics outcomes are represented in table 2. 11(12.94%) had threatened abortion, 10(11.76%) had miscarriage in the study group. Placental abruption was seen in 3 (4%) and placental previa 4 (5.3%) patients, causing antepartum hemorrhage. Preterm delivery was seen in 14(18.6%) and full-term delivery in 61(81.3%) of patients. 19(25.3%) of patients had vaginal delivery and in 56(74.7%) caesarean section was performed. Post-partum hemorrhage was seen in 11(14.6%) of patients.

Table 3 shows the relationship between fibroid number and obstetric outcomes. Placental abruption was seen 2

(2.6%) patients having multiple fibroids and in 1(1.3%) patient having single fibroid, which was not statistically significant (p value 0.607).3(4 %) patients having multiple fibroids and 1 (1.3%) having single fibroid had placenta previa, which was not statistically significant (pvalue 0.348).Preterm delivery in 6 (8%) of single fibroid patients and 8 (10.6%) of multiple fibroid patients was observed. No statistically significant difference was seen (p value 0.563). 14(18.6%) of single fibroid patients and 5 (6.6%) of multiple fibroid patients had vaginal delivery, which was statistically significant (p value 0.038).

Table 2: Obstetric outcomes

Parameters	Number	Percentage
Threatened abortion	11	12.94
Miscarriage	10	11.76
Preterm delivery	14	18.7
APH		
Abruption	3	4
Placenta Previa	4	5.3
Full term delivery	61	81.3
Vaginal delivery	19	25.33
Caesarean delivery	56	74.67
PPH	11	14.67

APH - Antepartum hemorrhage, PPH - Postpartum hemorrhage

Caesarean delivery was seen in 26(34.6%) of single fibroid patients and 30(40%) of multiple fibroid patients. There was a statistically significant difference (p value 0.038). Postpartum hemorrhage was seen in 5 (6.6%) of single fibroid patients and 6(8%) of multiple fibroid patients. No statistically significant difference was seen (p value 0.752).

Table 3: Relationship between fibroid number and obstetric outcome

Parameters	Single (n=40)	Multiple(n=35)	P value
Placental abruption	1 (1.3%)	2(2.6%)	0.607
Placenta previa	1(1.3%)	3(4%)	0.348
Preterm delivery	6(8%)	8(10.6%)	0.563
Vaginal delivery	14(18.6%)	5(6.6%)	0.038
Caesarean delivery	26(34.6%)	30(40%)	0.038
PPH	5(6.6%)	6(8%)	0.752

PPH - Postpartum hemorrhage, Values in number and percentage, P value is significant if value is < 0.05

Table 4 shows the relationship between fibroid location and obstetrics outcomes.1 (1.3%) patient of subserosal and 2 (2.6%) patients of intramural fibroid had placental abruption which was not statistically significant (p value 0.99). Placenta previa was seen in 4 (5.3%) patients only in intramural fibroids, which was statistically not significant (0.294). Preterm delivery was seen in 6 (8%) patients having subserosal fibroids and 8 (10.6%) of intramural fibroids. No statistically significant difference was found in two groups (p value 0.540). 13(17.3%) of subserosal fibroid patients had vaginal delivery while 6 (8%) of intramural fibroid patients had vaginal delivery which was statistically significant (p value 0.007). Caesarean section was performed

Table 4: Relationship between fibroid location and obstetric outcome

Parameters	Subserosal (n=29)	Intramural (n=46)	P value
Placental abruption	1 (1.3%)	2(2.6%)	0.99
Placenta previa	0	4(5.3%)	0.294
Preterm delivery	6(8%)	8(10.6%)	0.540
Vaginal delivery	13(17.3%)	6(8%)	0.0007
Caesarean section	16(21.3%)	40(53.3%)	0.004
PPH	3(4%)	8(10.6%)	0.99

in 16 (21.3%) and 40 (53.3%) of patients having subserosal and intramural fibroids respectively. There was a statistically significant difference (p value 0.004) as more caesarean sections were seen in intramural group. Postpartum hemorrhage was seen in 8 (10.6%) intramural fibroid patients and 3(4%) of subserosal fibroid. No statistically significant difference was seen in two groups (p value 0.99).

Discussion

The mean age of the patients was 32.6±4.3 years, which was similar to other studies like Saleh et al¹¹ and Egbe et al.¹² This shows that uterine fibroids are more associated with advancing maternal age. The association of fibroid with increased in gravidity was similar to other studies like Saleh et al¹¹ and Sheiner et al.¹³ There was an increased association of postpartum hemorrhage with uterine fibroids, which was similar to other studies like Febo et al¹⁴ and Parazzini et al.¹⁵ However few studies have shown no association between increased risk of post-partum hemorrhage and uterine fibroids like Coronado et al¹⁶ and Robert et al.¹⁷

Various studies reported a higher rate of caesarean delivery in cases of uterine fibroids like Qidwai et al¹⁸ and Stout et al.¹⁹ However contradictorily some studies have shown no association in the increased risk of caesarian section in pregnancy with fibroids.²⁰⁻²²

In our study we didn't find any significant difference in the occurrence of adverse obstetrics outcomes in relation to number of fibroids except for increased conversion to caesarean delivery. This was similar to study by Qidwai et al¹⁸ in terms of all adverse obstetrics outcomes except increased risk of caesarean section which was also not significant in this study.

However, Lam et al²³ and Ciavattini et al²⁴ who reported higher preterm delivery and caesarean section in multiple fibroids as compared to single fibroids.

Caesarean delivery was seen more commonly in intramural group which was similar to the study done by Zhao et al.²⁵ However other studies like Saleh et al¹¹ showed no difference in rate of caesarean delivery between intramural and subserosal group. However, no difference was found in other obstetrics outcomes between the intramural and subserosal group.

Conclusion

Pregnancy with uterine fibroids increases the incidence of obstetric complications in pregnant patients, so it is important to have regular checkup during the antenatal period for proper management.

Conflict of interest: None. **Disclaimer:** Nil.

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