

Study of Clinical Profile and Obstetric Outcomes among the Pregnant Women with Uterine Fibroids in Tertiary Care HospitalSwarnim Swati¹, Minakshi Bajpayee², Abha Rani Sinha³^{1,2}Senior Resident, Department of Obstetrics and Gynaecology, Sri Krishna Medical College and Hospital, Muzaffarpur, Bihar³Professor and Head of Department, Department of Obstetrics and Gynaecology, Sri Krishna Medical College and Hospital, Muzaffarpur, Bihar

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Abstract:

Background: Fibroids are the most prevalent benign tumours; they depend on oestrogen and are uncommon before menarche and after menopause. Fibroids can unintentionally discovered during clinical examinations or imaging tests. Pelvic pain, dysmenorrhea, AUB, dyspareunia, and pressure feelings are some of the patients' current complaints. Uterine or extrauterine fibroids are also possible. The purpose of this study is to identify the clinical characteristics and obstetric results in pregnant women with uterine fibroids.

Methods: From November 2022 to April 2023, this study was conducted at the Department of Obstetrics and Gynaecology, SKMCH, Muzaffarpur, Bihar. The study involved 48 pregnant women with uterine fibroids. Numerous factors were observed, including the mother's age, parity, the number and size of fibroids, obstetric difficulties, and the route of delivery. At every antenatal visit, a comprehensive clinical examination and standard investigations were done. Each appointment included ultrasound to evaluate the foetal condition and track any changes in the fibroid's size.

Results: 43 of the 48 patients who were recruited and started the trial finished it. Patients' median ages were 32.56±4.3 years; primigravida made up 27.91% of the population, while multigravida made up 72.09%. 74.82% of pregnancies were spontaneous, while 25.58% used assisted reproductive technology. There were 11.63% spontaneous abortions, 16.28% preterm births, and 81.08% full-term births. 75.68% of deliveries were by caesarean section, while 24.32 percent were by normal vaginal delivery. A threatening miscarriage affected 13.95% of women, preterm labour affected 16.28%, placenta previa caused antepartum haemorrhage in 5.41% of cases, and postpartum haemorrhage affected 6 (16.22%). Contrary to sub serosal fibroids and single fibroids, intramural location and multiple fibroids were linked to an increased risk of caesarian section.

Conclusion: Pregnancy uterine fibroids are linked to an increased risk of harmful obstetric problems. For the best possible outcome, it is essential to have regular checkups during the antenatal time to identify any harmful obstetric issues.

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

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Introduction

The most prevalent benign tumours are uterine fibroids. These come from the uterus' smooth muscles in women [1]. Oestrogen is thought to stimulate fibroid growth on a continuous basis[2]. Fibroid growth is oestrogen dependent. Important risk factors for the development of fibroids include obesity and null parity [3,4]. Before menarche, fibroids are uncommon, and they stop growing after menopause [5,6]. The majority of women have fibroids that are discovered by chance during a clinical examination or imaging tests for other symptoms such as abdominal pain or infertility[7]. Others may exhibit symptoms such as unusual uterine bleeding, dyspareunia and noncyclic pelvic pain[8,9], a feeling of a mass in the lower

abdomen, and urinary or rectal symptoms[10]. Because of the detrimental effects that irregular, heavy bleeding and pelvic discomfort have on a woman's social and emotional life, it needs to be treated right away[8,10]. The size of fibroids can range from tiny to large. The size and location of the fibroids largely influences the symptoms. Uterine or extrauterine fibroids are also possible. Uterine fibroids can be subserosal, intramural, or both. Cervical, wide ligament, round ligament, or uterosacral ligament fibroids, those found in the uterovesical fold, can be extra uterine fibroids. Conservative care, medicinal treatment, uterine artery embolisation, MRI guided focused ultrasound, minimally invasive surgery

(laproscopic and hysteroscopic myomectomy), and hysterectomy are some of the interventions used to treat fibroids.

Options for treatment depend on the patient's age, parity, and symptoms. Expectant management may be used in patients with fibroid sizes under 5 cm and no symptoms.

Material and Methods

This prospective study was carried out in Department of Obstetrics and Gynaecology, Sri Krishna Medical College and Hospital, Muzaffarpur, Bihar from November 2022 to April 2023. The study comprised 48 pregnant individuals with USG-documented uterine fibroid who were visiting an antenatal clinic. During the prenatal period, a thorough history, clinical examination, and regular investigations were recorded. The first trimester scan identified the pregnancy as having a fibroid. At subsequent prenatal appointments, ultrasounds were performed to evaluate the foetus and check for changes in fibroid size or other complications. Maternal age, gravidity, parity, the number and size of uterine fibroids, the gestational age at delivery, obstetric problems (such as preterm

birth, malpresentation, prom, placenta previa, placental abruption, and low birth weight), the mode of delivery, and the fetus's birth weight were all examined. The study excluded participants with histories of previous caesarean sections, surgeries, uterine malformations, or chronic conditions including diabetes or hypertension. The statistical analysis was done by using SPSS 19 software. P value of < 0.05 was taken as significant.

Results

The study included 48 individuals with uterine fibroids who became pregnant. However, because five patients were lost to follow-up, the trial could only be finished with 43 individuals. 19 (51.35%) patients had a single fibroid, whereas 18 (48.65%) had many. 23 (62.16%) individuals had fibroid locations that were intramural, while 14 (37.4%) patients had subserosal fibroid locations. The patients were 32.6±4.3 years old on average.

Twelve patients (27.91%) were primigravida, while thirty-one (72.09%) were multigravida. In 32 (74.82%) of the patients, spontaneous conception was noted; in 11 (25.58%) of the patients, assisted reproductive technology was used (table 1).

Table 1: Clinical parameters of completed follow –up patients (n=43)

Parameters	Mean ± SD	
Age	32.6 ± 4.3 years	
Gravidity	No. of cases	Percentage
• Primigravida	12	27.91%
• Multigravida	31	72.09%
• Spontaneous conception	32	74.82%
• Assisted reproductive treatment	11	25.58%

Table 2 shows the results of obstetrics. In the study group, 6 (13.95%) had threatened abortion and 5 (11.63%) had miscarried. Antepartum haemorrhage was caused by placental abruption in 2 (5.41%) patients and placental previa in 2 (5.41%). Thirty patients (81.08%) had full-term deliveries, while seven (16.28%) had preterm births. Nine patients (24.32%) delivered vaginally, while 28 patients (75.68%) underwent caesarean sections. Six patients (16.22%) experienced post-partum haemorrhage.

Table 2: Obstetrics Outcome

Parameters	No. of cases	Percentage
Threatened abortion	6	13.95%
Miscarriage	5	11.63%
Preterm delivery	7	16.28%
Antepartum hemorrhage (APH)		
Abruption	2	5.41%
Placenta previa	2	5.41%
Full term delivery	30	81.08%
Vaginal delivery	9	24.32%
Caesarean delivery	28	75.68%
Postpartum hemorrhage (PPH)	6	16.22%

The correlation between fibroid count and obstetric outcomes is seen in Table 3. Two (5.40%) patients with numerous fibroids and one (2.70%) patient with a single fibroid both experienced placental abruption, but this was not statistically significant

(p value 0.607). Placenta previa occurred in 3 (8.10%) patients with multiple fibroids and 1 (2.70%) patient with a single fibroid, however it was not statistically significant (p value 0.348). Preterm birth was noted in 2 (5.40%) individuals

with single fibroid and in 2 (5.40%) patients with multiple fibroid. The change was not statistically different (p value = 0.563). Vaginal delivery was statistically significant (6(16.21%) of single fibroid patients and 1(2.70%) of multiple fibroid patients; p value 0.038). Eight patients (21.62%) with a single fibroid and nine patients (24.32%) with

multiple fibroid patients underwent a caesarean section. A statistically significant difference was detected (p = 0.038). One (2.70%) single fibroid patient and one (2.70%) multiple fibroid patient both experienced postpartum haemorrhage. The difference was not statistically different (p value = 0.752).

Table 3: Relationship between fibroid number and obstetric outcome

Parameters	Single (n=19) n(%)	Multiple (n=18) n(%)	p-value
Placental abruption	1(2.70%)	2(5.40%)	0.607
Placenta previa	1(2.70%)	3(8.10%)	0.348
Preterm delivery	2(5.40%)	2(5.40%)	0.563
Vaginal delivery	6(16.21%)	1(2.70%)	0.038
Caesarean delivery	8(21.62%)	9(24.32%)	0.038
Postpartum hemorrhage (PPH)	1(2.70%)	1(2.70%)	0.752

The correlation between fibroid location and obstetric outcomes is seen in Table 4. Placental abruption occurred in 1 (2.70%) and 2 (5.40%) of the patients with subserosal and intramural fibroid, respectively, however it was not statistically significant (p value 0.99).

Only in intramural fibroids were placenta previa observed in 2 (5.40%) of the patients, which was statistically insignificant (0.294). One patient (2.70%) with subserosal fibroids and one (2.70%) with intramural fibroids both experienced preterm birth. In the two groups, there was no statistically significant difference (p value 0.540). In contrast to

2 (5.40%) intramural fibroid patients, 4 (10.81%) subserosal fibroid patients delivered vaginally, which was statistically significant (p value 0.007). Seven patients (18.92%) and fourteen patients (37.84%) with subserous and intramural fibroids, respectively, underwent Caesarean sections.

There was a statistically significant difference (p value 0.004) because the intramural group experienced more Caesarean sections. Two (5.40%) intramural fibroid patients and one (2.70%) subserosal fibroid patient both experienced postpartum haemorrhage. Two groups did not significantly vary from one another (p value 0.99).

Table 4: Relationship between fibroid location and obstetric outcome

Parameters	Subserosal (n=14) n(%)	Intramural (n=23) n(%)	p-value
Placental abruption	1(2.70%)	2(5.40%)	0.99
Placenta previa	0	2(5.40%)	0.294
Preterm delivery	1(2.70%)	1(2.70%)	0.540
Vaginal delivery	4(10.81%)	2(5.40%)	0.0007
Caesarean delivery	7(18.92%)	14(37.84%)	0.004
Postpartum hemorrhage (PPH)	1(2.70%)	2(5.40%)	0.99

Discussion

The patients' average age was 32.6±4.3 years, which was in line with findings from investigations by Saleh et al.[11] and Egbe et al.[12] This demonstrates that uterine fibroids are more frequently linked to older mothers. Similar findings were found in other studies by Saleh et al.[11] and Sheiner et al.[13] about the relationship between fibroid and increased gravidity. Similar to studies by Febo et al.14 and Parazzini et al.[15], there was an enhanced correlation between postpartum haemorrhage and uterine fibroids.

However, a small number of investigations, like those by Coronado et al.[16] and Robert et al.[17], have not found a connection between uterine fibroids and an increased risk of postpartum haemorrhage. According to research by Qidwai et al.[18] and Stout et al.[19], women with uterine

fibroids have a greater rate of caesarean deliveries. Contrarily, some studies have found no link between fibroids and an increased risk of caesarian section during pregnancy.[20-22]

Except for a greater conversion to caesarean birth, we found no significant difference in the incidence of unfavourable obstetric outcomes in connection to the number of fibroids in our study. Regarding all negative obstetric outcomes—aside from an increased chance of caesarean section, which was also not statistically significant in this analysis—this was comparable to the study by Qidwai et al.

However, Lam et al.[23] and Ciavattini et al.[24] observed that many fibroids had a greater premature delivery and caesarean section rate than single fibroids. In the intramural group, Caesarean deliveries were more frequent, which was similar to the research done by Zhao et al.[25] Other research,

such as that by Saleh et al.[11], did not find a difference in the caesarean delivery rate between the intramural and subserosal groups. The intramural and subserosal groups did not vary in other obstetric outcomes, either.

Conclusion

Uterine fibroids increase the risk of obstetric problems in pregnant women, thus regular checkups during the antenatal period are crucial for effective management.

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