

Maternal and Fetal Outcome in Fibroid Complicating Pregnancy: A Observational Study

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Abstract

Background: One of the most frequent benign tumours of the female reproductive system is uterine fibroids. As the majority of uterine fibroids are asymptomatic, their prevalence is generally underreported. Uterine fibroids can occur in pregnant women in a range of 1% to 10.7% of cases. Our study objective was to assess the prevalence, mother health, and foetal development in pregnancies complicated by fibroids.

Methods: From July 2020 to December 2021, this observational study was carried out at the Department of Obstetrics and Gynaecology, DMCH, Laheriasarai, Bihar. The study involved 100 pregnant women with fibroid tumours more than 3 cm. The criteria included maternal age, parity, gestational age, previous myomectomy history, problems during pregnancy, mode of birth, and caesarean myomectomy.

Results: In our study, the prevalence of fibroid complications during pregnancy was 0.78%. The majority of women (66%) are multiparous, and (38%) are between the ages of 31 and 35. Only 12 (12%) of the cases had a prior history of myomectomy, and the majority of cases were detected in the first trimester. Maternal consequences include abortion 4 (4%), APH 6 (6%), abdominal discomfort 12 (12%), PROM and premature labour 10 (10%), and PPH 20 (20%), even though asymptomatic patients make up the majority of cases. FGR 12(12%) and LBW 12(12%) are examples of foetal problems. The majority of births (58%) took place via caesarean section. Only 17.8% of the women underwent a Caesarean myomectomy.

Conclusion: Most uterine fibroids were asymptomatic throughout pregnancy, and risk rose as fibroids grew in size. Combating these problems requires prompt antepartum, intrapartum, and postpartum surveillance and care. In some circumstances, myomectomy leads to a better obstetric outcome.

Keywords: Fibroid in pregnancy, Caesarean section, Myomectomy

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Introduction

The benign smooth muscle tumours of the uterus are called leiomyomas or uterine fibroids. The prevalence in women of

reproductive age ranges from 20% to 50%[1]. Pregnancy rates range from 0.1% to 10%[2]. Women in the reproductive age group who

have fibroids have been linked to obstetric complications/poor obstetric outcomes, subfertility, menstrual abnormalities, and pelvic pain. Miscarriage, preterm labour, APH, red degeneration, malpresentation, malposition, FGR, LBW, PPH, increased incidence of surgical births, and caesarean hysterectomy are among the obstetric issues linked to fibroids during pregnancy. The development of uterine fibroids during pregnancy appears to be caused by ovarian steroids [3]. Pregnancy preserving myomectomy is generally risky due to the possibility of pregnancy loss or haemorrhage and hysterectomy, hence conservative medical care is the preferred option [4]. Submucosal and retroplacental fibroids are the most likely to cause complications [2,5]. Trial of labour is not seen as a contraindication, despite the fact that the caesarean section rate is higher in pregnant women with fibroids. Large fibroids, fibroids in the lower uterine tract, and fibroids in the cervix that cause labour dystocia and obstruction cause the majority of Caesarean sections.

This study goal was to assess the impact of fibroids on obstetric, maternal, and foetal

outcomes as well as the growth and subsequent management of these fibroids during pregnancy and the first few weeks after delivery.

Material and Methods

The present study was conducted in Department of Obstetrics and Gynaecology, Darbhanga Medical College and Hospital, Laheriasarai, Bihar from July 2020 to December 2021.

The cases with fibroid complications that were detected both before and during pregnancy and that were more than 3 cm were included.

All 100 patients received clinical and USG monitoring throughout their pregnancies. Data were evaluated according to age, parity, gestational age (by trimester), complications, birth method, and caesarean myomectomy criteria.

Results

In our hospital, there were 12800 deliveries overall over the study period. 100 fibroid-complicating pregnancies were identified out of these. So, 0.78% of pregnancies were complicated by fibroid.

Table 1: Age distribution of the patient

Age (years)	No. of Patients (N=100)	Percentage (%)
20 - 25	20	20%
26 - 30	28	28%
31 - 35	38	38%
>36	14	14%

Table 2: Parity of the patients

Parity	No. of Patients (N=100)	Percentage (%)
Primi	34	34%
Multi	66	66%

Table 3: Distribution Trimester wise Gestational age

Gestational age	No. of Patients (N=100)	Percentage (%)
First trimester	76	76%
Second trimester	18	18%
Third trimester	6	6%

Table 4: History of Myomectomy

	No. of Patients (N=100)	Percentage(%)
History of Myomectomy	12	12%

Table 5: Maternal complications of cases

Maternal complications	No. of Patients (N=100)	Percentage (%)
Asymptomatic	36	36%
Abortion	4	4%
APH	6	6%
Pain abdomen	12	12%
PROM / PTL	10	10%
Placental problems	4	4%
Malpresentation / Malposition	20	20%
PPH	20	20%
Peri-Partum Hysterectomy	-	-
Blood transfusions	24	24%

Table 6: Fetal Complications of the cases

Fetal complications	No. of Patients (N=100)	percentage(%)
FGR	12	12%
LBW	12	12%
Malpresentations /Malpositions	20	20%

Table 7: Mode of delivery of the cases

Mode of Delivery	No. of Patients (N=96)	Percentage (%)
Normal Delivery	40	41.6
Caesarean Section	56	58.3
Elective	38	39.58
Emergency	18	18.75

Out of 100 cases, 4 had spontaneous abortion.

Table 8: Caesarean Myomectomy of the cases

	No. of Patients (N=56)	Percentage (%)
Caesarean myomectomy	10	17.8%

Discussion

Pregnancy with fibroids has the potential to be quite dangerous. Despite the fact that most women are asymptomatic, many of them exhibit a variety of issues and difficulties. Our study incidence of fibroids, which is 0.78%, is comparable to the incidence of 0.1 to 2%, albeit it is slightly higher than that reported by Maliwad A. K. *et al.* [6] and lower than that reported by Rong Zhao *et al.*[7] (2.68%). This demonstrates that not all occurrences of uterine fibroids are detected

by USG testing, and most of them go undiagnosed. In contrast to Maliwad AK *et al.* [6] but equivalent to Kore S *et al.* [8], the majority of cases are multigravida, and the majority of cases are diagnosed in the first trimester. The size of fibroids also varies with the stage of pregnancy, making their detection during pregnancy difficult. The majority of fibroids enlarge as a result of maternal hormones.

Similar to Shahida J *et al.*[9], 36% of cases of pregnancy complications brought on by fibroids are asymptomatic. In our case study, abortions occur 4% of the time. The suggested mechanism is a constricted endometrial vascular supply that negatively impacts the foetus and causes abortion [10,11]. Some patients may experience more foetal or maternal problems. Maternal problems such as abdominal pain (12%), APH (6%), PROM/PTL (10%), and PPH (20%) were comparable to or somewhat greater in our study compared to the majority of studies [9,8,6]. Maliwad A. K. *et al.* [6] found a correlation between foetal and neonatal problems including FGR 12(12%), malpresentation and malposition 20(20%), and LBW 12(12%).

No patient of ours needed a peripartum hysterectomy. The necessity for a hysterectomy was lessened by early antenatal diagnosis, readiness, care of PPH, and the availability of blood transfusions. 58% of the patients in our study had caesarean sections, which is the majority. Between 34 and 73% of caesarean sections are performed, according to various research [8,12–14]. The most frequent risk factors for caesarean delivery include many fibroids, big fibroids, and fibroids in the lower uterine section [15]. A caesarean myomectomy was performed in 10 cases in the current study, or 17.8% of caesarean sections, compared to 11% in the study by Maliwad A K *et al.*[6]. Depending on the size, location, involvement of the lower uterine segment, and kind of fibroid, such as pedunculated/subserosal fibroids, myomectomy can be performed during caesarean section in some patients. The uterus adapts physiologically to control haemorrhage more effectively in the immediate postpartum period than at any other point in a woman's life, which is why myomectomy during caesarean section is recommended [5, 6].

Conclusion

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Every pregnant woman should undergo a thorough examination to check for fibroids of any size, location, or kind. Pregnancy fibroids are linked to a number of negative effects for both the mother and the foetus. With fibroid complicating pregnancy, caesarean sections occur frequently. Selected patients may benefit from a caesarean myomectomy, improving their chances of becoming pregnant.

References

1. Sharma V, Yadav K, Yadav N, Choudary S. Fetomaternal outcome & Complications of Pregnancy with Fibroids. International Multispeciality Journal of Health 2017;3(6):169-172.
2. Muthuramu P, Rajeswari R. Maternal and Fetal Outcome in Pregnancy with Fibroids: A Prospective Study. International Journal of scientific study 2016; 3(11):169-172.
3. Dagogo Abam, Terhemem Kasso. Uterine Fibroids and Pregnancy: A Review of the Challenges. Intechopen obstetrics 2017.
4. Aziken ME, Osaikhuwuomwan JA, Osemwenkha AP, Olorok OE, Iribhogbe I, Uwagboe CU. Pregnancies complicated by uterine fibroids: A case series on myomectomy in early pregnancy. Tropical Journal Obstetrics and Gynaecology 2017; 34:160-4.
5. Civattini A, Clevente N, DelliCarpini G, Di Giuseppe J, Giannubilo SR, Tranquili AL. Number and Size of uterine fibroids and obstetric outcomes. J Matern Fetal Neonatal Med 2015; 28:484 -488.
6. Maliwad AK, Rajal Thaker, Parul Shah. Pregnancy outcome in patients with fibroid. Int J Reprod Contracept Obstet Gynecol 2014;3(3):742-745.
7. Zhao R, Wang X, Zou L, Li G, Chen Y, Li C *et al.* Adverse obstetric outcomes in pregnant women with uterine fibroids in China: A multicenter survey involving

- 112,403 deliveries. PLoS ONE. 2017; 12(11): e0187821.
8. Shailesh Kore, Anahita Pandole, Aparna Hegde, Sangeeta Kulkarni, Miti Ahuja, Ambiyee VR. Pregnancy with fibroids. J Obstet Gynaecol India. 2004;54(4):361-362.
 9. Shahida J, Rinku G, Sapna Devi. Maternal and Fetal Outcome in fibroid Complicating Pregnancy in a Tertiary Care Centre. Journal of Medical science And Clinical Research. 2017;5(1):15543-15546.
 10. Radhika BH, Kusuma Naik, Shreelatha S, Harshini Vana. Pregnancy Outcome in Patients with Uterine Fibroids. Journal of clinical and diagnostic research. 2015; 9(10):1-3.
 11. Sarwar I, Habib S, Bibi A, Malik N, Parveen Z. clinical audit of foeto maternal outcome in pregnancies with fibroid uterus. Journal of Ayub Medical College, Abbottabad: JAMC. 2012; 24(1):79-82.
 12. Sheiner E, Bashiri A, Levy A, HersHKovitz R, Katz M, Mazor M. Obstetrics Characteristics and perinatal outcome of pregnancies with uterine leiomyomas. J Reprod Med. 2004; 49:182-186.
 13. Benson CB, Chow JS, Chang-Lee W, Hill JA 3rd, Doubilet PM. Outcome of pregnancies in women with uterine leiomyomas identified by sonography in first trimester. Clin Ultrasound. 2001; 29:261-264.
 14. Hasan F, Arumugam K, Sivanesaratnam V. Uterine leiomyomata in pregnancy. Int J Gynaecol obstet 1991;34:45-48. leiomyomata and risk of cesarean delivery. Obstet Gynaecol. 2007;109(2 Pt 1):410-414.
 15. Vergani P, Locatelli A, Ghidini A, Andreani M, Sala F, Pezzullo JC. Large uterine leiomyomata and risk of caesarean delivery. Obstet Gynaecol. 2007;109(2 Pt 1):410-414.