

Research Article**ANALYSIS OF OBSTETRIC COMPLICATIONS AMONG THE PREGNANT WOMEN WITH UTERINE FIBROID****Rashida¹, Sarwat Khalid², Shazia Saeed³, Asma Iqbal⁴, Saira Qadar⁵, Shehzad Niazi⁶**

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ABSTRACT

Background: Prevalence rates of uterine leiomyomas in women are estimated at 20%-40%. However, these numbers considerably drop for pregnant females. Namely, only 0.1%-3.9% women are expected to experience fibroids during pregnancy. These numbers can be easily explained because uterine leiomyomas are related to reduced fertility and poor implantation after in vitro fertilization. In addition, early detection of uterine fibroids is rather difficult since physical examinations and USG are not sensitive

enough for early diagnostics. Possible complications for pregnant women include such conditions as postpartum hemorrhage, antenatal bleeding, malpresentation, preterm labor, and intrauterine growth retardation.

Objective: To observe pregnant women with uterine fibroids and analyzing the obstetrical complications

Study design: An observational study

Duration and place of study: This study was conducted at Shaikh Zaid Woman Hospital, Shaheed Mohtarama Benazir

Bhutto Medical University Larkana from
February 2025 to February 2026

Methodology: Observational study was performed within the Department of Obstetrics and Gynaecology. Pregnant women experiencing uterine fibroids were selected based on the ultrasonographic examination. For statistical analysis, medical case record files were used. Descriptive statistics and multiple logistic regression were applied to detect any links between fibroid properties and perinatal outcomes.

Results: In the present study, there were 140 pregnant females with uterine fibroids, where the age range of the majority was 26-30 years. In this study, the subserosal fibroid was seen more commonly. There were 86 females who had c-section (61.4%). Complications were seen in 83.5% of the cases where the main complications were blood transfusion (20%), pre-term labour (21.4%), and miscarriage (16.4%). Among fetal outcomes, 16.4% cases showed low birth weight, while 20% of the patients required NICU admission.

Conclusion: Females who are pregnant with fibroids require close monitoring as they are linked with a few complications.

Keywords: Ultrasonography (USG), Intrauterine growth restriction (IUGR), Neonatal Intensive Care Unit (NICU), Postpartum Hemorrhage (PPH), Antepartum Haemorrhage (APH)

INTRODUCTION

Uterine fibroid is one of the most common tumors in women's reproductive organs. They are formed from smooth muscles of the uterus [1]. According to estimates, up to 20% to 40% of women have fibroids [2]. Nonetheless, their frequency among pregnant women is rather small; hence, only 0.1%-3.9% suffer from uterine leiomyomas [3]. The lower frequency of fibroids in pregnancy can be explained by their association with infertility and low probability of successful implantation after IVF procedure [4].

Uterine fibroids' clinical diagnosis is not easy at all. Clinically, only 42% of large fibroids (those which exceed 5 cm in size) are identified, while only 12.5% of fibroids with diameters from 3 to 5 cm are detected [5]. Also, ultrasonic identification of uterine fibroids in pregnancy proves very inefficient because the efficiency fluctuates around 1.4% to 2.7% [6,7]. The reason for such low efficiency of diagnosis is mostly associated

with the inability to differentiate fibroids from regular myometrial thickening [8].

Some possible complications associated with pregnancy and uterine fibroids are spontaneous miscarriage, APH, acute abdomen, red degeneration of the fibroids. Some patients may need surgery, such as laparotomy [9]. Premature labor, malpresentation, malpositioning are the possible complications, too. Possible complications after delivery are postpartum hemorrhage (PPH), retention of the placenta, and dysfunctional labor [10]. Moreover, women with uterine fibroids are predisposed to IUGR. Nevertheless, conservative management applies to most patients with this condition [11]. However, in case of complications such as torsion of a pedunculated fibroid, surgery is needed to treat this complication. The purpose of the current study is to evaluate the consequences of uterine fibroids on patients' obstetric outcomes.

METHODOLOGY

This research was conducted as an observational study performed in the department of Obstetrics and Gynecology. In this study, pregnant ladies with uterine fibroids diagnosed by USG were selected.

The diagnosis of fibroids was done prenatally and antenatally as well. Patients having positive USG reports only were included in this study. This research was approved by the Ethical Review Committee of this institute.

Exclusion Criteria: Pregnant women with a history of cesarean section or uterine surgeries before were excluded from the study. Moreover, females who had uterine malformations were also not a part of this study. Lastly, females who had diabetes or hypertension were also excluded.

All the relevant data was obtained through patients' record files, also ensuring their confidentiality. The patient case record form included many variables and information. It comprised demographic details along with antenatal, intra-partum and postpartum history. The parameters included maternal age, parity, gravida, gestation age at recruitment and delivery. The numbers and sizes of fibroids were also taken into account.

Any possible complications during pregnancy were recorded. Such complications as preterm delivery, malpresentation, PROM, placental abruption, placenta previa, and low birth weight are included. The mode of delivery

and possible maternal morbidity and mortality due to uterine fibroids during pregnancy are also included. Moreover, neonatal outcomes were also identified. They include NICU admission, birth weight, APGAR scores, and neonatal resuscitation.

The descriptive statistical approach was employed for data analysis. Data concerning discrete variables were inputted using Microsoft Excel. Categorical variables' results were presented using numbers and percentages. Quantitative data results were presented using the mean along with standard deviations. Further analysis was conducted by means of multiple logistic

regression analysis. It allowed finding any correlations between perinatal outcomes and uterine fibroids' characteristics.

RESULTS

There were a total of 140 females involved in this research. The range of age of the females in our study started from 19 years to more than 41 years. The mean age calculated was 31.1 ± 4.88 years. The majority of the females were from the age group of 26 to 30 years. 40.7% of the patients were primigravida. Table number 1 shows the age and gravida status of the patients.

Table No. 1:

Parameters	N	%
Age (yrs)		
• 19 to 25	9	6.6
• 26 to 30	59	42.1
• 31 to 35	42	30.0
• 36 to 40	25	17.8
• ≥ 41	5	3.5
Gravida status		
• Primigravida	57	40.7

● Gravida 2 to 3	54	38.5
● Gravida ≥ 4	29	20.8

Table number 2 shows the characteristics of uterine fibroids.

Table No. 2:

Characteristics of Uterine Fibroids	N	%
Type		
● Submucous	29	20.7
● Intramural	11	7.9
● Subserous	100	71.4
Number		
● 1	39	27.9
● 2 to 3	71	50.7
● ≥ 4	30	21.4
Location		
● Pedunculated	17	12.1
● Fundus	108	77.1
● Cervix	7	5.0
● Tubes (cornual)	8	5.8

Table number 3 shows the pregnancy outcomes.

Table No. 3:

Pregnancy Outcomes	N	%
Gestational Age (weeks)		
• ≤ 20	4	2.9
• 21 to 32	5	3.5
• 33 to 37	17	12.1
• 38 to 40	106	75.7
• ≥ 40	8	5.8
Delivery mode		
• Vaginal/Normal	37	26.4
• C-section	86	61.4
• Assisted Breech	3	2.3
• Instrumental	5	3.5
• Hysterotomy	5	3.5
• Suction and evacuation	4	2.9

As there are 86 females who had c-section, table number 4 shows the indications for c-section.

Table No. 4:

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WITH UTERINE FIBROID**

Indications	N (n=86)	%
Placenta Previa	7	8.1
Malpresentation	15	17.4
PROM with poor Bishop score	28	33.7
Fetal Distress	13	15.1
Non-progressive Labor	10	10.6
Uterine Inertia	13	15.1

Complications were seen in 117 cases. Table number 5 shows the complications during pregnancy.

Table No. 5:

Complications	N	%
Postpartum Hemorrhage	13	9.2
Laparotomy for Abdominal Pain	0	0.0
Threatened Miscarriage	23	16.4
Threatened Preterm Labour	30	21.4
Blood Transfusion	28	20.0
Admission for Pain in Abdomen	8	5.8

Antepartum Bleeding	15	10.7
Total	117	83.5

Table number 6 shows the fetal outcomes.

Table No. 6:

Fetal Outcomes	N	%
Abortion	8	5.8
Neonatal Death	2	1.4
Low APGAR Score at 5 minutes	15	10.7
Low Birth Weight	23	16.4
Required NICU Admission	28	20.0
Required Neonatal Resuscitation	20	14.2
Total	96	68.5

DISCUSSION

The number of pregnancies complicated by fibroids is rising globally, mostly owing to delays in conception and older maternal age. Size and position of the leiomyoma are some of the parameters that determine the risks during pregnancy. Placental and near-placental fibroids have been found to result in complications like abortion, IUGR, APH,

and PPH [12]. Uterine obstruction during labor occurs if fibroids develop at the cervical or low uterine segments. Complications like fetal malpresentation have also been noted to be associated with the condition and mostly breech presentations occur depending on fibroid size and position. Improper surgery practices like overuse of electrosurgical energy and

failure to close myoma beds in multiple layers have been identified to cause uterine rupture [13].

Several studies indicate multiple fibroids lead to preterm deliveries and an increase in cesarean births and breech presentations whereas larger fibroids (>5 cm) contribute to preterm deliveries and PPROM [14,15,16]. Similarly, Pullemalla et al. indicated the presence of fibroids in pregnancy is associated with increased ante-, intra-, and post-partum complications including cesarean delivery, threatened miscarriages, and PPH [17]. The above evidence correlates with our findings of an increased number of caesarean sections (61.4%) and premature rupture of membranes. Nevertheless, there was no significant relationship between the mode of delivery and the number and localization of the fibroids.

Research has revealed several complications related to the presence of large uterine fibroids during pregnancy. For example, Dasgupta et al. stated that malpresentation was highly prevalent (60%), while there was a great need for blood transfusions (87%), including bilateral prophylactic internal iliac artery ligation and subsequent myomectomy

in childbirth [18]. On the other hand, the prevalence of malpresentation in our research was 17.4%. In another multicenter study conducted by Zhao et al., fibroid location greatly affected the development of PPH, with intramural fibroids having the highest prevalence [19]. Meanwhile, in our study, despite PPH being detected in 9.2% of patients, there was no significant link between PPH and fibroid location. Uterine fibroids have been shown to increase the rates of cesarean section and blood transfusion, with 20% of women requiring transfusions.

A multiple regression analysis has shown that neither type, location nor number of uterine fibroids had a significant effect on perinatal outcomes [20]. This might be explained by the use of a small number of participants, as well as limited settings and data source (retrospective). Nonetheless, the link between uterine fibroids and perinatal outcome remains unclear, and therefore more extensive research is required.

CONCLUSION

In summary, there has been an increased number of patients who present with uterine fibroids due to the advancement in

technology, with a lot of women experiencing asymptomatic fibroids that have been identified during pregnancy. While fibroids contribute to problems such as miscarriage, PROM, PPH, malpresentation, and increase cesarean section rate resulting into high-risk pregnancy, no significant relationship could be found in this study on the type, location, and number of fibroids with respect to the various complications experienced by mothers during pregnancy.

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Conflict in the interest

The authors had no conflict related to the interest in the execution of this study.

Permission

Prior to initiating the study, approval from the ethical committee was obtained to ensure adherence to ethical standards and guidelines.

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