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Exploration the relationship between uterine fibroid and pregnancy outcome among women attending Tikrit teaching hospital

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Abstract
Uterine leiomyoma is one of the most frequent benign tumors of the female reproductive system. It develops from the smooth muscle of the uterus. It affects 20-40% of women, although the estimated incidence during pregnancy is 0.1-3.9%. This study aimed to evaluate the obstetrics outcomes of patients with uterine fibroids and their consequences. The present study is cross sectional study was conducted in obstetric department in the Tikrit Teaching Hospital, in Tikrit city, from 1st October 2023 to 30th June 2024. A convenient sample of 50 pregnant women with uterine fibroid, at third trimester. Inclusion Criteria include pregnant women with a documented uterine fibroid diagnosed prenatally or antenatally, at reproductive age (18- 45 years), with any parity. Any Pregnant women with previous cesarean section, uterine or cervical surgery, Uterine Deformity, Chronic conditions such as hypertension and diabetes were excluded.
Data collected by direct interview with the pregnant women, taking information about sociodemographic variables, antenatal, Intrapartum, Postpartum history, number, size, and characteristics of fibroids. Ultrasonography to confirm gestational age, fetal growth restriction, fibroid location, and size were done. Verbal and written informed consent was obtained individually from all participants. Most of cases had single uterine fibroid 40(80%), followed by multiple fibroids 10(20%). Most of the fibroids were posteriorly located 33(66%), followed by anterior location 17(34%); located at the uterine body 32(64%), fundus 15(30%) and near the cervix 3(6%). Intramural found among 34(68%), subserosal 8(16%) and submucosal 8(16%). The uterine fibroid size was < 5 cm among 25(50%), 5-10 cm among 24(28%), and > 10 cm among 1(2%). Most of pregnant women had cesarean section 26(52%), spontaneous abortion found among 2(4%), History of early vaginal bleeding found among 2(4%), Malpresentation found among 14(28%), antepartum hemorrhage 11(22%), postpartum hemorrhage among 22(44%), abdominal pain needing admission found among 2(4%), blood transfusion found among 8(16%). The bad perinatal outcome was Apgar score ≤ 7 at 1 minute found among 13(26%), Apgar score ≤ 7 at 5 minutes 3(6%), Neonatal admission 10(20%), Low Birth weight 16(32%), Preterm Birth 7(14%). Blood transfusion significantly more common among those with fibroid 5-10 cm than < 5 cm; 8(33.3%), 0 (0%) respectively. No difference in obstetrical outcome found regarding difference in number of uterine fibroids. Low Birth weight 6(60%) was significantly associated with multiple fibroids. preterm Birth 4(16.7%) was significantly associated with the size of the uterine fibroid. Careful screening is needed for diagnosis of the uterine fibroid during pregnancy to decrease the unfavorable maternal and neonatal outcomes.

Keywords: Pregnant women, sociodemographic variables, antenatal history

Introduction
Uterine leiomyoma is one of the most frequent benign tumors of the female reproductive system. It develops from the smooth muscle of the uterus. It affects 20-40% of women globaly, although the estimated incidence during pregnancy is 0.1-3.9% [1, 2]. in Iraq reported to be 33.9-42.4% among non pregnant women [3, 4].
Reflecting the growing trend of delayed childbearing, the incidence of fibroids during pregnancy is likely to increase [5].
Pregnancies associated with fibroid are usually asymptomatic and without serious complications but sometimes adversely affect course of pregnancy [6]. Intramural and subserous fibroids of less than 3 cm are not clinically significant [7].

Moving to the clinical aspects of the disease, bleeding is the most common presentation, due to excessive dilatation of the tumors' venules throughout the menstrual cycle and thus excessive blood loss. Second, pelvic discomfort and dysmenorrhea can be due to severe enlargement of the uterus by the growing mass [8].

The diagnosis of uterine fibroids during pregnancy is not an easy issue. In physical examination, it is possible to diagnose 42% of large (> 5 cm) and 12.5% of smaller fibroids (3-5 cm) [9]. The usefulness of ultrasound examination in pregnancy is limited, mainly due to the difficulty in differentiating the physiological thickening of the uterine myometrium. During ultrasound examination fibroids are only diagnosed in 1.4-2.7% of cases [10]. during pregnancy, some imaging studies have shown an increase of leiomyoma volume at any time during pregnancy, but others have noted size reduction or no change, in addition, in late pregnancy and puerperium the tendency is of volume reduction [11].

The growth of uterine fibroids (UFs) during pregnancy may occur mainly in the first 7 gestational weeks, because of increased estrogen levels and also human chorionic gonadotropin, angiogenic and growth factors. The growth of UFs has a nonlinear trend in pregnancy, with a median change in volume up to 140% in early gestation. Conversely, in the postpartum, sustained ischemia and apoptosis promoted by uterine remodeling during its involution contribute to the shrinkage of UFs [12]. Pregnancy with fibroid is associated with complications like antepartum hemorrhage (APH), acute abdomen, red degeneration of fibroid, laparotomy, preterm labor, malpresentation, and malposition of fetus, postpartum hemorrhage (PPH), retention of the placenta, dysfunctional labor and, intrauterine growth restriction (IUGR) [13]. The majority of cases of complications of uterine fibroid with pregnancy require conservative management, whereas, some cases like pedunculated fibroid with torsion require emergency surgical intervention [14, 15].

Patients and Methods

Study Design and Duration

The present study is cross sectional study was conducted in obstetric department in the Tikrit Teaching Hospital, in Tikrit city, from 1st October 2023 to 30th June 2024.

The Study Population and Sampling Method:

A convenient sample of 50 pregnant women with uterine fibroid, at third trimester. In this study the Data was collected by direct interview with the pregnant women.

1. **Questionnaire:** information about sociodemographic variables, antenatal, Intrapartum, Postpartum history (maternal age, parity, gravida, gestational age at enrollment and at delivery, number and size of fibroids).
- **Obstetric history include:** History of abortion, history of early vaginal bleeding, preterm birth, premature rupture of membranes (prom), malpresentation, placenta previa, placental abruption, low birth weight, and mode of delivery.
- **Neonatal history include:** Birth weight, APGAR score, Neonatal Resuscitation, Neonatal Intensive Care Unit (NICU) admission.

2. **Clinical examination:** Careful general clinical and obstetrical examination. Abdominal examination for assessment of estimated fundal height.
3. **Ultrasonography:** Ultrasonography to confirm gestational age, fetal growth restriction, fibroid location, and size.
4. **Laboratory investigations:** blood group, complete blood count and hemoglobin level. All investigations done at the lab of Tikrit Teaching hospital.

Ethical Considerations

1. Approval of the study from the council of College of Medicine / Tikrit University was obtained.
2. Approval of research committee of the Salah Al-Din Health directorate was obtained.
3. At the beginning of the interview, verbal and written informed consent was obtained individually from all participants after clearly explaining the purpose of the study and the type of data required, and respondents were assured of data confidentiality and privacy.

Statistical Analysis

Questionnaire forms were checked at the end of the interview to avoid missing data. SPSS Software version 25.0 was used to perform statistical analysis for this study. Qualitative data were presented as numbers and percentages, while continuous data were presented as mean ± standard deviation.

Comparison of study groups was carried out using chi-square test for categorical data, and Student's t-test for continuous data. P-value of < 0.05 was considered statistically significant.

Results

The commonest age group was 25-34 years 35(70%), followed by ≥ 35 years 15(30%).

The commonest educational level was primary school and secondary school 22(44%), and 19(38%) respectively.

The commonest educational level was housewife 33(66%), followed by employer 17 (37%). The gravidity of ≥ 4 was the commonest 28(56%) followed by gravida 2-3 found among 17(37%), and primigravida 5(10%), as shown in table 1.

Table 1: The General Characteristics of Study Sample

General characteristics		Frequency	Percent
Age	25-34 years	35	70.0
	≥ 35 years	15	30.0
Mother education	read & write	3	6.0
	1ry school	22	44.0
	2ndry school	19	38.0
	college	6	12.0
Mother Job	Housewife	33	66.0
	Employer	17	34.0
Gravidity	Primigravida	5	10.0
	Gravida 2-3	17	34.0
	Gravida ≥ 4	28	56.0
	Total	50	100.0

The diagnosis time was prepregnancy among 40(80%) and during pregnancy among 10(20%), as shown in figure 1.

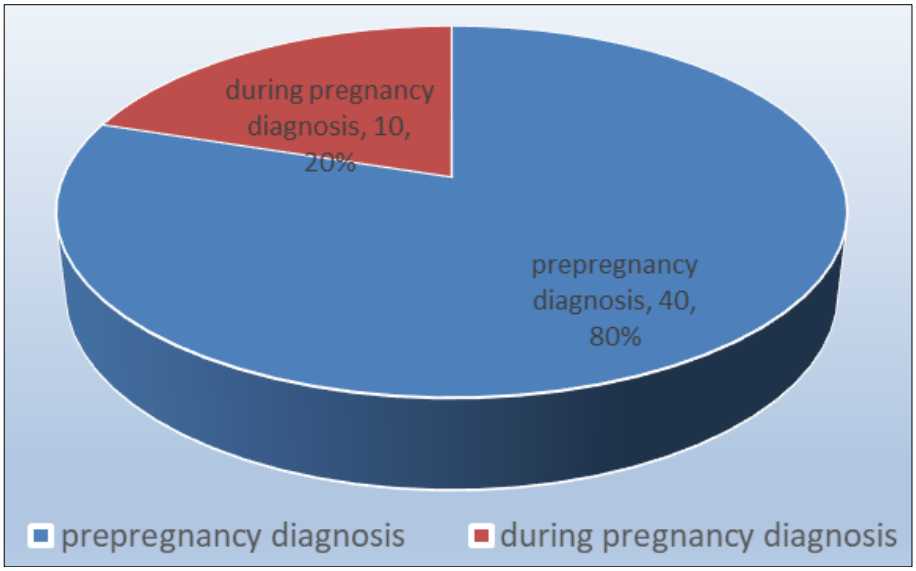

Fig 1: The Diagnosis Time of Uterine Fibroid

Most of cases had Single uterine fibroid 40(80%), followed by multiple fibroids 10(20%). Most of the fibroids were posteriorly located 33(66%), followed by anterior location 17(34%), and most of them at the uterine body 32(64%), fundus 15(30%) and near the cervix 3(6%). Intramural was the most common sit 34(68%), followed by subserosal 8(16%) and submucosal 8(16%). As shown in table 2.

Table 2: The Characteristics of Fibroid Diagnosed in Study Sample

		Frequency	Percent
No. of fibroid cod	Single fibroid	40	80.0
	Multiple fibroids	10	20.0
Sit of fibroid	Anterior	17	34.0
	Posterior	33	66.0
Location us	cervix	3	6
	Fundus	15	30
	body	32	64
topographic location	Subserosal	8	16.0
	Intramural	34	68.0
	Submucosal	8	16.0
Total		50	100.0

The uterine fibroid size was < 5 cm among 25(50%), 5-10 cm among 24(28%), and > 10 cm among 1(2%). As shown in figure 2.

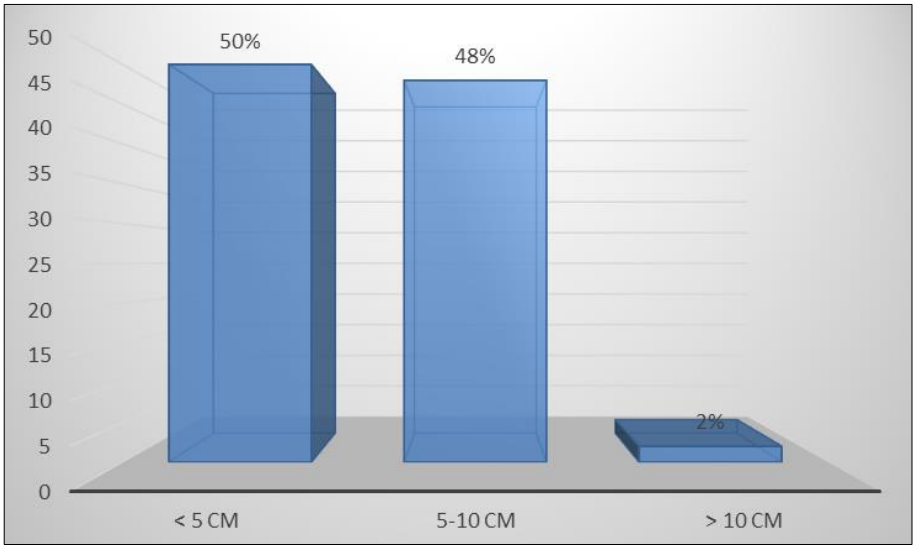

Fig 2: The Uterine Fibroid Size

History of spontaneous abortion found among 2(4%), History of early vaginal found among 2(4%), No one had history of premature rupture of membrane (PROM) 50(100%), antepartum hemorrhage (APH) 11(22%), post

partum hemorrhage (PPH) among 22(44%), no one need laparotomy for sever pain, abdominal pain needing admission found among 2(4%), Malpresentation found among 14(28%), blood transfusion found among 8(16%). The mode of delivery was vaginal delivery among 24(48%), and CS among 26(52%) (CS with myomectomy among 2(4%) and CS without myomectomy among 24(48%)). as shown in table 3.

Table 3: The Maternal Outcome of Cases of Pregnancy with Fibroid.

		Frequency	Percent
Modes of delivery	Vaginal delivery	24	48.0
	CS with myomectomy	2	4.0
	CS without myomectomy	24	48.0
History of spontaneous abortion	Yes	2	4.0
	No	48	96.0
History of early vaginal bleeding	Yes	2	4.0
	No	48	96.0
Premature Rupture Of Membranes (PROM),	Yes	2	4.0
	No	48	96.0
Placenta Previa	No	50	100.0
Placental Abruption	No	50	100.0
APH	Yes	11	22.0
	No	39	78.0
PPH	Yes	22	44.0
	No	28	56.0
Laparotomy due to pain	No	50	100.0
Abdominal pain needing admission	Yes	2	4.0
	No	48	96.0
Malpresentation	Yes	14	28.0
	No	36	72.0
Blood transfusion	Yes	8	16.0
	No	42	84.0
Modes of delivery	Vaginal delivery	24	48.0
	CS with myomectomy	2	4.0
	CS without myomectomy	24	48.0
	Total	50	100.0

The perinatal outcome was no one had congenital anomaly, Apgar score ≤ 7 at 1 minute found among 13(26%), Apgar score ≤ 7 at 5 minutes 3(6%), Neonatal admission (NICU) 10(20%), Low Birth weight 16(32%), Preterm Birth 7(14%), as shown in table 4.

Table 4: The Perinatal Outcome of Cases of Pregnancy with Fibroid.

		Frequency	Percent
Congenital anomaly	No	50	100.0
Apgar score ≤ 7 at 1 minutes	Yes	13	26.0
	No	37	74.0
Apgar score ≤ 7 at 5 minutes	Yes	3	6.0
	No	47	94.0
Apgar score at ≤ 7 at 10 minutes	No	50	100.0
Neonatal admission (NICU)	Yes	10	20.0
	No	40	80.0
Birth weight	Low Birth weight	16	32.0
	Normal Birth weight	34	68.0
Preterm Birth	Yes	7	14.0
	No	43	86.0
	Total	50	100.0

The spontaneous abortion found among 2(8%) of those with uterine fibroid< 5 cm and in 0(0%) among 5-10 cm, and none of those with > 10 cm, this relation was statistically not significant. The History of early vaginal bleeding found among 2(8%) of those with uterine fibroid< 5 cm and in 0(0%) among 5-10 cm, and none of those with > 10 cm, this relation was statistically not significant. The History of early vaginal bleeding found among 2(8%) of those with uterine fibroid< 5 cm and in 0(0%) among 5-10 cm, and none of those with > 10 cm, this relation was statistically not significant.

Malpresentation found among 5 (20%) of those with uterine fibroid < 5 cm and 9(37.5%) of those with uterine fibroid 5-10 cm, and none of those with uterine fibroid > 10 cm, this relation was statistically not significant. Blood transfusion found among 0 (0%) of those with uterine fibroid < 5 cm and 8(33.3%) of those with uterine fibroid 5-10 cm, and none of those with uterine fibroid > 10 cm. this relation was statistically significant as shown in table 5. The caesarian section done in 13(52%) of those with uterine fibroid< 5 cm and in 13(55.2%) among 5-10 cm, and none of those with > 10 cm, this relation was statistically not significant.

Table 5: The Maternal Outcome of Pregnancy According to Fibroid Size.

	< 5 cm		5-10 cm		> 10 cm	
	No.	%	No.	%	No.	%
Modes of delivery P value > 0.05						
History of Spontaneous abortion (P value > 0.05)						
Yes	2	8.00%	0	0.00%	0	0.00%
No	23	92.00%	24	100.00%	1	100.00%
History of early vaginal bleeding (P value > 0.05)						
Yes	2	8.00%	0	0.00%	0	0.00%
No	23	92.00%	24	100.00%	1	100.00%
Premature Rupture Of Membranes (PROM),P value > 0.05						
Yes	0	0.00%	0	0.00%	0	0.00%
No	25	100.00%	24	100.00%	1	100.00%
Malpresentation (P value > 0.05)						
Yes	5	20.00%	9	37.50%	0	0.00%
No	20	80.00%	15	62.50%	1	100.00%
Blood transfusion (P value < 0.05*)						
Yes	0	0.00%	8	33.30%	0	0.00%
No	25	100.00%	16	66.70%	1	100.00%
Placenta Previa						
No	25	100.0%	24	100.0%	1	100.0%
Placental Abruption (P value > 0.05)						
No	25	100.0%	24	100.0%	1	100.0%
APH (P value > 0.05)						
Yes	6	24.0%	5	20.8%	0	0.0%
No	19	76.0%	19	79.2%	1	100.0%
PPH (P value > 0.05)						
Yes	10	40.0%	11	45.8%	1	100.0%
No	15	60.0%	13	54.2%	0	0.0%
Abdominal pain needing admission(P value > 0.05)						
Yes	0	0.0%	2	8.3%	0	0.0%
No	25	100.0%	22	91.7%	1	100.0%
Modes of delivery P value > 0.05						
Vaginal delivery	12	48.00%	11	45.80%	1	100.00%
CS	13	52.00%	13	55.20%	0	0.00%
Total	25	100.00%	24	100.00%	1	100.00%

The History of Spontaneous abortion found in 1(2.5%) of those with single uterine fibroid, and 1(10%) of those with multiple uterine fibroids, this relation was statistically not significant (P value > 0.05). The History of early vaginal bleeding found in 2(5%) of those with single uterine fibroid, and 0(0%) of those with multiple uterine fibroids, this relation was statistically not significant (P value > 0.05). The PROM found in 2(5%) of those with single uterine fibroid, and 0(0%) of those with multiple uterine fibroids, this relation was statistically not significant (P value > 0.05). The Malpresentation found in 11(27.5%) of those with single uterine fibroid, and 3(30%) of those with multiple uterine fibroids, this relation was statistically not significant (P value > 0.05).

The APH found in 8(20%) of those with single uterine fibroid, and 3(30%) of those with multiple uterine fibroids, this relation was statistically not significant (P value > 0.05). The PPH found in 18(45%) of those with single uterine fibroid, and 4(40%) of those with multiple uterine fibroids, this relation was statistically not significant (P value > 0.05). The Abdominal pain needing admission found in 1(2.5%) of those with single uterine fibroid, and 1(10%) of those with multiple uterine fibroids, this relation was statistically not significant (P value > 0.05).

The Blood transfusion found in 5(12.5%) of those with single uterine fibroid, and 3(30%) of those with multiple uterine fibroids, this relation was statistically not significant (P value > 0.05). The caesarian section done in 21(52.5%) of those with single uterine fibroid, and 5(50%) of those with multiple uterine fibroids, this relation was statistically not significant (P value > 0.05).as shown in table 6.

Table 6: The Maternal Outcome of Pregnancy According to Fibroid Number.

	Single fibroid		Multiple fibroid	
	NO.	%	NO.	%
History of Spontaneous abortion (P value > 0.05)				
Yes	1	2.50%	1	10.00%
No	39	97.50%	9	90.00%
History of early vaginal bleeding (P value > 0.05)				
Yes	2	5.00%	0	0.00%
No	38	95.00%	10	100.00%
Premature Rupture Of Membranes (PROM)				
Yes	0	0%	0	0.0%
No	40	100.0%	10	100.0%

Malpresentation (P value > 0.05)				
Yes	11	27.5%	3	30.0%
No	29	72.5%	7	70.0%
Placenta Previa				
No	40	100.0%	10	100.0%
Placental Abruption				
No	40	100.0%	10	100.0%
APH(P value > 0.05)				
Yes	8	20.0%	3	30.0%
No	32	80.0%	7	70.0%
PPH(P value > 0.05)				
Yes	18	45.0%	4	40.0%
No	22	55.0%	6	60.0%
Abdominal pain needing admission(P value > 0.05)				
Yes	1	2.5%	1	10.0%
No	39	97.5%	9	90.0%
Laparotomy due to pain				
No	40	100.0%	10	100.0%
Blood transfusion (P value > 0.05)				
Yes	5	12.5%	3	30.0%
No	35	87.5%	7	70.0%
Modes of delivery(P value > 0.05)				
Vaginal delivery	19	47.50%	5	50.00%
CS	21	52.50%	5	50.00%
Total	40	100.0%	10	100.0%

Apgar score ≤ 7 at 1 minute among those with < 5cm 8(32%), among those 5-10 cm 5(20.8%), and non among those had fibroid > 10 cm. Apgar score ≤ 7 at 5 minute among those with < 5cm 2(8%), among those 5-10 cm 1(4.2%), and non among those had fibroid > 10 cm. this relation was statistically not significant (P value > 0.05)

Neonatal admission (NICU) found among 5 (20%) of those with uterine fibroid < 5 cm and 4(16.7%) of those with uterine fibroid 5-10 cm,and 1(100%) of those with uterine fibroid > 10 cm this relation was statistically not significant (P value > 0.05). Low Birth weight found among 6 (24%) of those with uterine fibroid < 5 cm and 9(37.5%) of those with uterine fibroid 5-10 cm,and 1(100%) of those with uterine fibroid > 10 cm this relation was statistically not significant (P value > 0.05).

Preterm Birth found among 2 (8%) of those with uterine fibroid < 5 cm and 4 (16.7%) of those with uterine fibroid 5-10 cm,and 1(100%) of those with uterine fibroid > 10 cm, this relation was statistically significant (P value < 0.05), as shown in table 7.

Table 7: The Perinatal Outcome of Pregnancy According to Fibroid Size.

	< 5 cm		**5-10 cm**		**> 10 cm**	
	No.	**%**	**No.**	**%**	**No.**	**%**
Apgar score ≤ 7 at 1 minute(P value > 0.05)						
Yes	8	32.0%	5	20.8%	0	0.0%
No	17	68.0%	19	79.2%	1	100.0%
Apgar score ≤ 7 at 5 minutes(P value > 0.05)						
Yes	2	8.0%	1	4.2%	0	0.0%
No	23	92.0%	23	95.8%	1	100.0%
Neonatal admission (NICU) (P value > 0.05)						
Yes	5	20.0%	4	16.7%	1	100.0%
No	20	80.0%	20	83.3%	0	0.0%
Birth weight (P value > 0.05)						
Low Birth weight	6	24.0%	9	37.5%	1	100.0%
Normal Birth weight	19	76.0%	15	62.5%	0	0.0%
Preterm Birth (P value < 0.05*)						
Yes	2	8.0%	4	16.7%	1	100.0%
No	23	92.0%	20	83.3%	0	0.0%
Total	25	100.0%	24	100.0%	1	100.0%

Apgar score ≤ 7 at 1 minute found among 8(20%) of those with single fibroid, and 5(50%) among those with multiple fibroid, this relation was statistically not significant (P value < 0.05). Apgar score ≤ 7 at 5 minute found among 3(7.5%) of those with single fibroid, and 0(0%) among those with multiple fibroid, this relation was statistically not significant (P value < 0.05).

Neonatal admission (NICU) found among 8(20%) of those with single fibroid, and 2(20%) among those with multiple fibroid, this relation was statistically not significant (P value < 0.05). Low Birth weight found among 10(25%) of those with single fibroid, and 6(60%) among those with multiple fibroid, this relation was statistically significant (P value < 0.05). Preterm Birth found among 5(12.5%) of those with single fibroid, and 2(20%) among those with multiple fibroid, this relation was statistically not significant (P value < 0.05), as shown in table 8.

Table 8: The Perinatal Outcome of Cases of Pregnancy According to Fibroid Number

	Single fibroid		Multiple fibroid	
	No.	%	No.	%
Apgar score ≤ 7 at 1 minute (P value > 0.05)				
Yes	8	20.0%	5	50.0%
No	32	80.0%	5	50.0%
Apgar score ≤ 7 at 5 minutes (P value > 0.05)				
Yes	3	7.5%	0	0.0%
No	37	92.5%	10	100.0%
Neonatal admission (NICU) (P value > 0.05)				
Yes	8	20.0%	2	20.0%
No	32	80.0%	8	80.0%
Birth weight (P value < 0.05)				
Low Birth weight	10	25.0%	6	60.0%
Normal Birth weight	30	75.0%	4	40.0%
Preterm Birth (P value > 0.05)				
Yes	5	12.5%	2	20.0%
No	35	87.5%	8	80.0%
Congenital anomaly				
No	40	100.0%	10	100.0%
Total	40	100.0%	10	100.0%

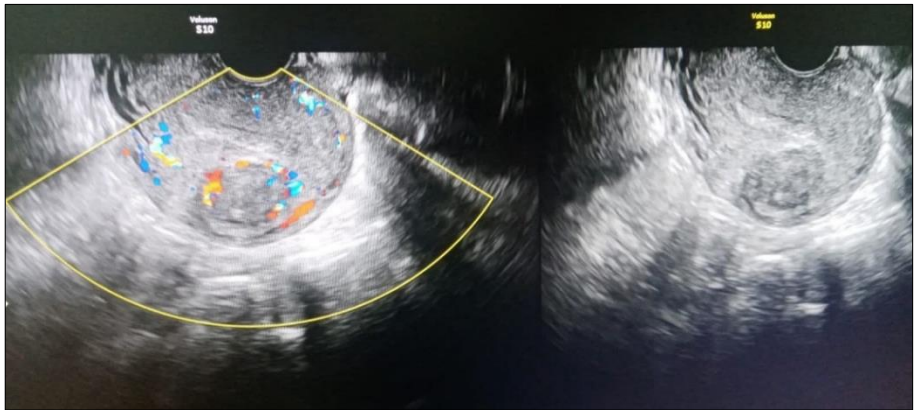

Fig 3: There is Well Define Hypo Echoic Heterogenous Intramural U.F. In Posterior Part of Uterus,,Size is 21x27 mm

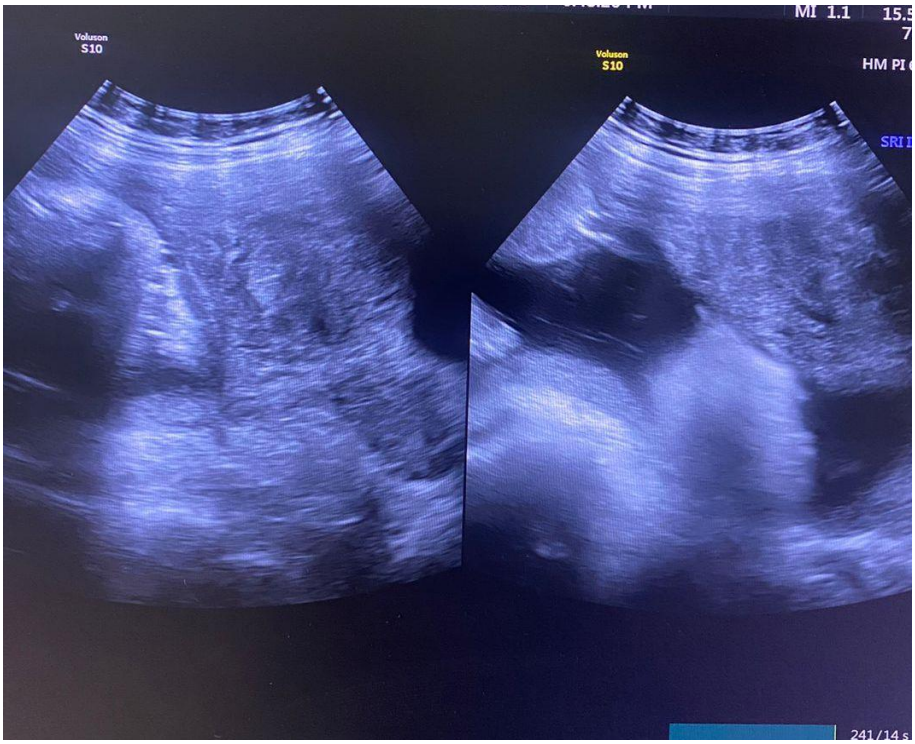

Fig 4: Pregnant at 37wks+5 Days Intramural U.F. with Anterior Part of Uterus,,size =59x62mm

Discussion

The global incidence of pregnancy with fibroid uterus is on a rising trend because of delays in conception and rising maternal ages. Myomas are the most frequently recorded benign smooth muscle tumor of the uterus, afecting 20%-60% of women of reproductive age and may negatively affect fertility and outcome of pregnancy [16]. The size and location of the leiomyoma are the two most important parameters that predict morbidity in pregnancy. If the placenta is implanted directly over the fibroid or adjacent to it, complicati7ons occurred are abortion, IUGR, APH, and PPH [17].

The commonest age group was 25-34 years 35(70%), followed by ≥ 35 years 15(30%). This goes with Cagan M *et al.* [18] in 2020 found the median age was 35 years with range (18-41) among pregnant women with fibroid. Ciavattini A *et al.* [19] found that the mean age of women was the same in both groups (34.8 ± 4.2 years). Fibroids are associated with advanced maternal age and subfertility [20].

The gravidity of ≥ 4 was the commonest 28(56%) followed by gravida 2-3 found among 17(37%), and primigravida 5(10%), this goes with Al Sulaimani R in 2021 found that the median gravidity was 1(1-8) and parity 0(0-5) [21].

The uterine fibroid size was < 5 cm among 25(50%), 5-10 cm among 24(28%), and > 10 cm among 1(2%).This goes with Ciavattini A *et al.* [22] found that the 48 (21.9%) showed at least one large uterine fibroid (5 cm) with a mean diameter of 6.1 cm (SD 1.3, range 5-10.7 cm) and the mean diameter of fibroids was 4.1 cm (±0.8 cm, SD; range 0.7-10.7 cm). Cagan M *et al.* [23] in 2020 found the Uterin fibroid size at birth (cm) was 2.54 ± 0.77.

In current study Intramural fibroids was the most common sit 34(68%), followed by subserosal 8(16%) and submucosal 8(16%). This goes with Cagan M *et al.* [24] in 2020 found the Topographic locations of uterine fibroids were subserosal (68%), intramural (28%) and submucosal (4%). This goes with Sankaran SM *et al.* [25] Found 67% had intramural fibroids.

Most of pregnant women had cesarean section 26(52%) while vaginal delivery found among 24(48%), this goes with Li H *et al.* [26] in 2024 found that fibroid presence led to an elevated risk of cesarean delivery (RR=1.95, 95%CI: 1.67, 2.28; *P*<0.001). Wu LP *et al.* [27] in 2018 found the risk of cesarean delivery was higher among those with uterine fibroid in comparison with pregnant women without uterine fibroid (RR=1.92, 95%CI: 1.64, 2.25; *p*<0.001)

History of spontaneous abortion found among 2(4%),this supported by Xue HZ [28] in 2021 found that the miscarriage rate for pregnant women with uterine fibroids was 13.42% compared with 2.84% for the no-fibroid group.

Malpresentation found among 14(28%).

The bad perinatal outcome was, Apgar score ≤ 7 at 1 minute found among 13(26%), Apgar score ≤ 7 at 5 minutes 3(6%), Neonatal admission (NICU) 10(20%), Low Birth weight 16(32%), Preterm Birth 7(14%). Dasgupta A *et al.* [29] found no change in Apgar scores of the babies in two groups. Sankaran SM *et al.* [30] Found that low birth weight among 20% of the babies of mother with uterine fibroids.

Malpresentation was non significantly higher among those with larger fibroid 5-10 cm 9(37.5%) than those with fibroid < 5cm 5 (20%). Blood transfusion significantly more common among those with fibroid 5-10 cm than < 5 cm; 8(33.3%), 0 (0%) respectively. This goes with Li H eta l [31] in a large meta-analysis study in 2024 found that the presence of large fibroids significantly elevated the risk of breech presentation (RR = 1.50, 95% CI: 1.03, 2.19; P=0.036), placenta previa (RR =5.04, 95% CI: 2.12, 12.01; *p*<0.001), and PPH (RR= 1.62, 95% CI: 1.16, 2.25; P=0.004), compared with small fibroids, while Small fibroids, however, significantly raised the risk of breech presentation (RR=1.40, 95%CI: 1.10, 1.79; P=0.006), placental abruption (RR=3.75, 95%CI: 2.83, 4.97; *p*<0.001), cesarean delivery (RR = 1.48, 95%CI: 1.33, 1.65; *p*<0.001), PPH (RR=1.65, 95%CI: 1.41, 1.92; *p*<0.001), and IUGR (RR=1.15, 95%CI: 1.01, 1.30; P= 0.029), compared with an absence of fibroids

The Malpresentation found non significantly higher among multiple fibroids 3(30%) than single fibroid 11 (27.5%). The antepartum hemorrhage found non significantly higher among multiple fibroids 3(30%) than single fibroid 8(20%). The Abdominal pain needing admission found non significantly higher among multiple fibroids 1(10%) than single fibroid 1(2.5%). The Blood transfusion non significantly higher among multiple fibroid 3(30%) than single fibroid 5(12.5%), while the postpartum hemorrhage found non significantly higher among single fibroid 18(45%) than multiple fibroid 4(40%).

This goes with Li H eta l [32] in a large meta-analysis study in 2024 found the presence of multiple fbroids did not increase the risk of PPROM (RR =1.31, 95%CI: 0.55, 3.13; P=0.545), placental abruption (RR=1.22, 95%CI: 0.51, 2.94; P=0.651), placenta previa (RR =1.50, 95%CI: 0.90, 2.51; P=0.122), preterm birth (RR=0.87, 95%CI: 0.51, 1.50; P=0.627), cesarean delivery (RR=0.85, 95%CI: 0.50, 1.44; P=0.539), and PPH (RR =1.45, 95%CI: 0.53, 3.95; P=0.464), compared with a single fibroid.

Low Birth weight 6(60%) was significantly associated with multiple fibroids. Kesmodel U *et al.* [33] in 2020 found that the risk of very preterm, extreme preterm and the pooled group of very and extreme preterm birth, was significantly increased, OR 4.00 (1.75-9.13), OR 20.1 (8.04-50.22) and OR 6.5 (3.51-12.19), respectively the biological basis for the associations between fibroids and adverse outcomes is not clear. Several studies, however, have suggested that reduced uterine distension resulting from physical interference by the fibroids may be one of the reasons [34]. Moreover, women with fibroids have been found to have lower oxytocinase activity, leading to higher levels of oxytocin which, inturn, would lead to preterm contractions. It is also possible that degraded submucosal fibroids may lead to chronic inflammation or infection, with the consequent production of cytokines potentially resulting in elevated risks for preterm delivery [35, 36].

Conclusion

1. The commonest age group was 25-34 years 35(70%), followed by ≥ 35 years 15(30%). The gravidity of ≥ 4 was the commonest 28(56%) followed by gravida 2-3 found among 17(37%), and primigravida 5(10%), the diagnosis time was prepregnancy among 40(80%) and during pregnancy among 10(20%).
2. Most of cases had Single uterine fibroid 40(80%), followed by multiple fibroids 10(20%). Most of the fibroids were posteriorly located 33(66%), followed by anterior location 17(34%), and most of them at the uterine body 32(64%), fundus 15(30%) and near the cervix 3(6%). Intramural was the most common sit

34(68%), followed by subserosal 8(16%) and submucosal 8(16%). The uterine fibroid size was < 5 cm among 25(50%), 5-10 cm among 24(28%), and > 10 cm among 1(2%).

3. Most of pregnant women had cesarean section 26(52%) while vaginal delivery found among 24(48%), history of spontaneous abortion found among 2(4%), History of early vaginal bleeding found among 2(4%), No one had history of premature rupture of membrane (PROM), Malpresentation found among 14(28%), antepartum hemorrhage 11(22%), post-partum hemorrhage among 22(44%), no one need laparotomy for severe pain, abdominal pain needing admission found among 2(4%), blood transfusion found among 8(16%).
4. The bad perinatal outcome was, Apgar score ≤ 7 at 1 minute found among 13(26%), Apgar score ≤ 7 at 5 minutes 3(6%), Neonatal admission (NICU) 10(20%), Low Birth weight 16(32%), Preterm Birth 7(14%).
5. The caesarian section was non significantly more common among those with fibroid size of 5-10 cm 13(55.2%), followed by < 5cm 13(52%).No relation was found with history of spontaneous abortion, history of early vaginal bleeding, the history of early vaginal bleeding. Malpresentation was non significantly higher among those with larger fibroid 5-10 cm 9(37.5%) than those with fibroid < 5cm 5 (20%).
6. Blood transfusion significantly more common among those with fibroid 5-10 cm than < 5 cm; 8(33.3%), 0 (0%) respectively.
7. single uterine fibroid was non significantly had higher proportion of caesarian section 21(52.5%) than multiple fibroids, 5(50%), history of early vaginal bleeding 2(5%), 0(0%) respectively, the premature rupture of membrane 2(5%), 0(0%) respectively.
8. The history of spontaneous abortion found non significantly higher among multiple fibroids 1(10%) than single fibroid 1(2.5%). The Malpresentation found non significantly higher among multiple fibroids 3(30%) than single fibroid 11(27.5%). The antepartum hemorrhage found non significantly higher among multiple fibroids 3(30%) than single fibroid 8(20%). The Abdominal pain needing admission found non significantly higher among multiple fibroids 1(10%) than single fibroid 1(2.5%). The Blood transfusion non significantly higher among multiple fibroid 3(30%) than single fibroid 5(12.5%), while the post-partum hemorrhage found non significantly higher among single fibroid 18(45%) than multiple fibroid 4(40%).
9. Low Birth weight 6(60%) was significantly associated with multiple fibroids. Apgar score ≤ 7 at 1 minute 5(50%), neonatal admission 8(20%), and preterm birth 2(20%), was non significantly associated with multiple fibroids. preterm Birth 4(16.7%) was significantly associated with the size of the uterine fibroid.

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