

Case series: Pregnancy Outcome in Patients with Uterine Fibroids

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ABSTRACT

Fibroids in pregnancy is a commonly encountered clinical entity. Objective of this study was to evaluate the maternal and fetal outcome in women having pregnancy with uterine fibroids. We present the clinical, obstetric data, perinatal outcomes of 15 patients from a prospective study. Fifteen pregnant women with fibroid >3cm were prospectively included in study. Major proportion of patient with fibroids were in younger age group of 25-30 years when compared to older age group of 31-35 years (66% vs 33%). Fibroids were more frequent in multi-gravidae, compared to primigravidae. In almost half of patients, (53.3%) fibroids were diagnosed before pregnancy. Common complications encountered during pregnancy in decreasing order of frequency were pain abdomen (46.6%), followed by threatened preterm labour (26.6%) and anaemia (26.6%). Out of 15, three (20%) women had abortion. In remaining, 11/12 patients attained term pregnancy between 37 to 40 weeks. Two patients required antenatal myomectomy. Caesarean section was done in 75% of women who attained term pregnancy and one patient had technical difficulty during caesarean section. Post partum haemorrhage was seen in 5/15 (33.3%) of patients. Out of 12, five babies were low birth weight. Four babies required NICU admission. There was no perinatal mortality. In our small patient series high incidence of caesarean section rates and increased incidence of threatened preterm labour, anaemia, and postpartum haemorrhage, was observed in pregnant patients with fibroids and hence, the pregnancy with fibroids should be considered as high risk pregnancy.

Keywords: Fibroids, Leiomyomas, Obstetric complications

INTRODUCTION

Uterine fibroids (leiomyomas) are benign smooth muscle tumors of the uterus. They are found in approximately 20–50% of women of reproductive age [1]. Incidence of fibroids varies from 0.1% to 12.5% [2]. Incidence of fibroids increases with maternal age at pregnancy [2]. Fibroid less than 5 cm in diameter tend to remain stable or decrease in size [3-5] and, larger fibroids (>5 cm) tend to grow during the pregnancy [5]. The risk of adverse events in pregnancy increases with the size of the fibroid [6]. Different complications with variable rates of incidence have been reported in pregnancy with fibroids which include ante-partum haemorrhage, acute abdomen, laparotomy, preterm labour, foeto-pelvic disproportion, malposition of the foetus, retention of the placenta, postpartum haemorrhage, red degeneration, dysfunctional labour, retained placenta, and retained products of conception, intra uterine growth restriction (IUGR) [7-11]. These complications are more commonly seen with large submucosal and retroplacental fibroids [6]. Despite the high incidence of all these adverse events during pregnancy, perinatal outcomes in these patients tend to be fair [9]. Due to risk of all these complications pregnancy with fibroids has been a topic of research for many years. However, there is paucity of literature involving Asian population and especially Indian population [1,12,13]. In this context, this prospective study was planned to assess the outcome of pregnancy in patients with uterine fibroids involving Indian population and we present the case series of 15 patients with their demographic, clinical and obstetric data and perinatal outcomes.

CHARACTERISTICS OF PATIENTS

All the findings are summarized in [Table/Fig-1-6]. Fifteen (6- primi and 9-multi gravidae) patients were included in this study. Mean age was 28.9 years. History of recurrent pregnancy loss was present in 7 patients. Six patients were primigravida and 9 were multigravida, of which four patients had history of more than three recurrent abortions, obstetric history of 2 abortions were seen in 2 patients and 1 patient had previous history of single abortion. Of 9

who underwent LSCS, 4 had LSCS at request (two patients also had combined indications such as recurrent pregnancy loss with precious pregnancy), 2 were done for myomectomy scar, 3 for non progress of labour.

Majority of the patients (8/15) had prenatal diagnosis of fibroids. Majority of patients had single fibroid and one thirds had multiple fibroids. Most common location of fibroids was intramural followed by subserosal location. Around 20% (3/15) of the patients had early pregnancy loss. Majority of the patients had (11/12) term pregnancy. Pain was the most frequently noted complication followed by threatened preterm, and anaemia. High incidence of PPH, and IUGR were noted.

S. no	Age	Parity	Type of Conception	H/O abortions	Time of Diagnosis
1	28	G1	S	No	12 weeks
2	28	G3A2	S	Yes	14 weeks
3	32	G4A3	S	Yes	Before pregnancy
4	31	G1	IVF	No	Before pregnancy
5	26	G1	S	No	16 weeks
6	28	G4A3	Ol	Yes	Before pregnancy
7	30	G4A3	Ol	Yes	Before pregnancy
8	32	G4A3	IVF	Yes	Before pregnancy
9	28	G3A2	Ol	Yes	14 weeks
10	26	G1	S	No	16 weeks
11	27	G2A1	S	Yes	Before pregnancy
12	28	G2P1L1	S	No	Before pregnancy
13	27	G2P1L1	S	No	Before pregnancy
14	28	G1	Ol	No	16 weeks
15	26	G1	S	No	28 weeks

[Table/Fig-1]: Maternal demographic characteristics: n=15

S- Spontaneous, Ol-ovulation induction, IVF-Invitro fertilization, G-Gravida, P-Para, L-living, A-Abortion

There was one preterm baby, who developed RDS (8.3%). The incidence of IUGR was 41.6% (5/12). Four babies (33.3%) were admitted in NICU. There was no neonatal death noted in our study. USG findings of few patients are shown in [Table/Fig-7A-C].

S. no	Number	Site	Size (cm)
1	Single	IM-Ant, LUS	5-10
2	Single	IM-Post	5-10
3	Single	IM-Ant, fundal	>10
4	Single	IM-Ant, fundal	<5
5	Single	SS, Pedunculated	>10
6	Multiple	SS IM-fundal IM-Ant	>10 <5
7	Multiple	IM-Fundal IM-Ant	>10 <5
8	Single	IM-Post	5-10
9	Single	IM-Ant	>10
10	Single	IM-fundal	<5
11	Multiple	SS IM	>10 <5
12	Multiple	SS IM-Ant	5-10 <5
13	Single	IM-post	<5
14	Multiple	SS IM-Ant	<5 5-10
15	Single	IM-post	<5

[Table/Fig-2]: Ultrasound characteristics fibroid: n= 15
SS-Subserosal, IM-Intramural

DISCUSSION

This study was conducted to evaluate the outcome of pregnancies complicated by leiomyomas. Mean maternal age in our study was found to be 28.9 years, which is comparable to other studies, showing occurrence of leiomyomas in second and third decades of life [1,13].

We found that fibroids were less frequent in first pregnancy compared to multigravidae. This is in consistent with earlier studies by Noor et al., [13] (73.33% multigravida and 23.66% primigravida) and Sarwar et al., [1] (63% multigravida and 37% primigravida). Regarding obstetric complications, in our study, 3 out of 15 patients (20%) had abortion. High incidence of abortions in patients with fibroids is in agreement with results from earlier studies [1,9]. The proposed mechanism is compressed endometrial vascular supply, affects the fetus adversely resulting in abortion [1]. In our study, 7/15 (47%) had significant pain abdomen, which is slightly higher to results reported in the prior studies [1,3,9,14]. These patients were managed by bed rest, analgesics and reassurance. Cause of pain was due to red degeneration, which is thought to be result of effect of progesterone on fibroids, and occurs more commonly in pregnancy [12].

Though 4/15 (26.6%) patients had history of threatened preterm labour during pregnancy, 11 (73.3%) patients had continued their pregnancy till term and only one patient (7%) had preterm delivery at 34 weeks of gestation due to PPROM. The incidence of preterm delivery was low in our study compared to study by Sarwar et al., (33.3%) [1]. We reported slightly increased incidence of PROM,

S. no	Abortions	Anaemia	Pain abdomen	PPROM	Threatened Preterm	IUGR	APH	Antenatal myomectomy
1	N	Y	Y	N	Y	Y	N	N
2	N	N	Y	N	N	N	N	N
3	N	Y	Y	N	Y	N	N	N
4	N	N	N	N	N	Y	N	N
5	N	N	Y	N	N	N	N	Y
6	N	Y	Y	Y	Y	Y	N	Y
7	Y	N	Y	N	Y	N	N	N
8	N	N	N	N	N	Y	N	N
9	N	N	N	N	N	N	N	N
10	N	Y	Y	N	N	N	N	N
11	Y	N	N	N	N	N	N	N
12	Y	N	N	N	N	N	N	N
13	N	N	N	N	N	N	N	N
14	N	N	N	N	N	Y	N	N
15	N	N	N	N	N	N	N	N

[Table/Fig-3]: Antenatal complications: n= 15
PPROM- Preterm Premature rupture of membranes, IUGR- Intrauterine growth restriction, APH- antetatum haemorrhage, Y-Yes, N-No

S. no	GA at delivery	Mal-presentation	PROM	Obstructed labour	Prolonged labour	PPH	Technical difficulties during delivery	Adherent placenta
1	Term	N	N	N	N	N	N	N
2	Term	N	Y	N	Y	Y	N	N
3	Term	N	Y	N	Y	Y	Y	N
4	Term	N	N	N	N	N	N	N
5	Term	N	N	N	N	N	N	N
6	34 weeks	N	N	N	N	Y	N	N
7	-	-	-	-	-	-	-	-
8	Term	N	N	N	N	Y	N	N
9	Term	N	N	N	N	N	N	N
10	Term	N	Y	N	Y	Y	N	N
11	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-
13	Term	N	N	N	N	N	N	N
14	Term	N	N	N	N	N	N	N
15	Term	N	N	N	N	N	N	N

[Table/Fig-4]: Intrapartum variables, n=12
GA-gestational age, PROM-Premature rupture of membranes, PPH-Post partum haemorrhage, Y-Yes, N-No

S. no	Blood transfusion	Sepsis	Subinvolution	Reduction in size of fibroid	Vaginal delivery	LSCS
1	Y	N	Y	Y	Y	N
2	N	N	Y	Y	N	Y (non progress of labour)
3	Y	Y	Y	N	N	Y (non progress of labour)
4	N	N	N	Y	N	Y (Maternal request)
5	N	N	N	Y	N	Y (Myomectomy scar)
6	Y	Y	N	Y	N	Y Myomectomy scar)
7	-	-	-	-	-	-
8	Y	N	Y	N	N	Y (Maternal request)
9	N	N	N	Y	N	Y (Maternal request)
10	Y	N	Y	Y	N	Y (non progress of labour)
11	-	-	-	-	-	-
12	-	-	-	-	-	-
13	N	N	N	Y	Y	N
14	N	N	Y	Y	N	Y (Maternal request)
15	N	N	N	Y	Y (Vacuum)	N

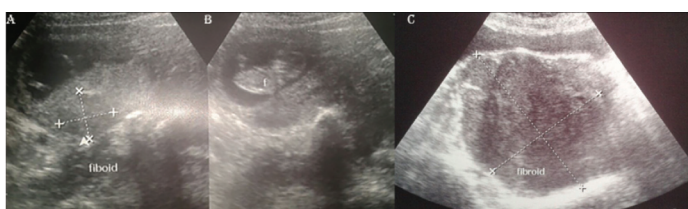
[Table/Fig-5]: Postpartum variables, n= 12.

LSCS-Lower segment caesarean section, Y-Yes, N-No

S. no	Term	Birth weight	Birth asphyxia	NICU admission
1	Y	2.25	N	Y (Hyperbilirubinemia)
2	Y	2.8	N	N
3	Y	2.9	N	N
4	Y	2.4	N	Y (Hyperbilirubinemia)
5	Y	2.8	N	N
6	N	2	Y	Y (RDS, Prematurity)
7	-	-	-	-
8	Y	2.4	N	N
9	Y	2.8	N	N
10	Y	2.8	N	N
11	-	-	-	-
12	-	-	-	-
13	Y	2.75	N	N
14	Y	2.3	Y	Y (Asphyxia)
15	Y	2.6	N	N

[Table/Fig-6]: Perinatal outcome, n=12

RDS- respiratory distress Syndrome, Y-Yes, N-No



[Table/Fig-7]: A) Longitudinal ultrasound images showing live intrauterine gestation; B) 2.5X2.5cm fibroid. This patient had uneventful course during pregnancy; C) Longitudinal ultrasound images of uterus showing a large intramural fibroid of size 12x8 cm. This patient had an early abortion

(3/15, 20%) compared to Sarwar et al., (10%). Anaemia was found in four patients (26.6%), comparable with study by Noor et al., (20.6%) [13].

Regarding mode of delivery, 3 patients had spontaneous onset of labour. Of 12 patients, 9 had LSCS, 2 had spontaneous vaginal delivery and 1 patient was delivered by ventouse assistance. This is similar to studies by Noor et al., (70%) and three folds higher, compared to studies by Sarwar et al., (2.6%) [1,13].

In our patient population, 5 patients (33.3%) had PPH, similar to study by Noor et al., (33.3%) and slightly high, compared with 14% in study by Lam et al., [13,15]. Only one patient had technical difficulty during caesarean section, owing to the larger fundal fibroid, similar to Sarwar et al., [1]. However, no patient in our study required caesarean hysterectomy, as compared to 13.33% in Noor et al., study [13], Caesarean myomectomy should be avoided unless fibroid is in line of incision. Two of our patients underwent myomectomy,

at 14 to 16 weeks of gestation, one for torsion of pedunculated subserosal fibroid and another for multiple subserosal and intramural fibroids with pain abdomen resistant to conservative management.

Surgical management is reserved in patients with subserosal and pedunculated fibroids with pain and who do not respond to conservative management. Other complications like obstructed labour, adherent placenta, uterine inversion, malpresentation, placenta previa, abruption placentae, prolapse of pedunculated fibroid through cervix, reported in earlier studies were not observed in our study [8-10,12,15].

CONCLUSION

Pregnancy with fibroids is associated with various adverse events during pregnancy which included but not limited to high caesarean section rates, threatened preterm labour, anaemia, post partum haemorrhage, and hence, it should be considered as high risk pregnancy.

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