Section: Obstetrics & Gynaecology

Original Research Article

SAFE MOTHERHOOD AND CHALLENGES- FIBROID COMPLICATING PREGNANCY

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ABSTRACT

Background: Uterine fibroids or leiomyomas are benign smooth muscle tumours of the uterus, found in approximately 20–50% of women of reproductive age and many are asymptomatic. The main objectives of this study were to assess the obstetric outcome in pregnancy with fibroid, its complications and management.

Materials and Methods: This was a prospective observational study following confirmed diagnosis of uterine fibroids from ultrasonography with continuing pregnancy. The study conducted over two years pried from January 2022 to December 2023. All demographic information, baseline characteristics, Obstetric outcome- mode of delivery, complications and management and the foetal outcome- abortions, low birth weight, term or preterm, and associated complications and Neonatal intensive care (NICU)admissions. were noted.

Results: Out of 6142 antenatal visits, 54 cases were identified with uterine fibroids during pregnancy, incidence being 0.8%. Majority belonged to age group between 25-30 years were about 31 (57%), 32 (59.2%) were primigravida, 18 (33.3%) had BMI more than 25 kg/m^2, 8 (14.81%) had spontaneous miscarriages, 46 cases (85%) continued pregnancy, among them 28 (51.8%) underwent Lower segment caesarean section (LSCS), 18(33.27%) vaginal deliveries. 15 (32.6%) had pain abdomen, low birth weight (LBW) seen in 16 (34%) of deliveries.

Conclusion: Pregnancy with uterine fibroids associated with various untoward obstetric outcomes. Pre-conceptional counselling, frequent antenatal visits and multidisciplinary team approach for planning delivery in tertiary care centres is essential for safe maternal and foetal outcome.

Key Words: Fibroid uterus, Pregnancy, Miscarriage, LSCS, Low birth weight, NICU.

INTRODUCTION

Uterine fibroids or leiomyomas are benign smooth muscle tumours of the uterus, found in approximately20–50% of women of reproductive age and many are asymptomatic.[1] Fibroids less than 5cms in diameter tend to remain stable or decrease in size, where as larger fibroids (>5 cms) tend to grow during pregnancy. Incidence in pregnancy ranges from 0.1%-10%.[2] Risk factors for fibroids include nulliparity, family history, polycystic ovarian syndrome, diabetes, hypertension, and obesity.

The risk of adverse events during pregnancy due to uterine fibroids depends on size, location and number of fibroids. Fibroids may also increase the risk of antepartum, intra and postpartum-related complications, such as miscarriage, pain abdomen, malpresentations, antepartum haemorrhage (APH), preterm labour, foetal disproportion, malposition of the foetus, retained placenta, red degeneration, dysfunctional labour, postpartum haemorrhage (PPH), retained products of conception and intrauterine growth restriction (FGR). These complications are more commonly observed in large, multiple and submucosal retro placental fibroids. However, there are fewer studies to quantify the risk associated pregnancy outcomes due to uterine fibroids. Hence, we have undertaken

prospective observational study with the objective to assess the obstetric outcome in pregnancy with fibroid, its complications and management.

MATERIALS AND METHODS

With institutional review board approval, we recruited cases with uterine fibroid during pregnancy in the department of obstetrics and gynaecology, Malla Reddy medical college for women. This was a prospective observational study conducted following confirmed diagnosis of uterine fibroids from ultrasonography with continuing pregnancy. The study conducted over two years period from January 2022toDecember 2023.

The cases of uterine fibroids with pregnancy and fibroid measuring, more than or equal to 2 cms size, those diagnosed before and during pregnancy, pregnant women aged above 18 years were included. Patients were thoroughly investigated and followed up clinically and ultrasonically till delivery and outcome was recorded. Data was collected using a questionnaire. All demographic information, laboratory results were noted. Obstetric outcome- mode of delivery, complications and management and the foetal outcome - abortions, low birth weight, term or preterm, and associated complications and NICU admissions were observed.

RESULTS

Out of 6142 antenatal visits, 54 cases were identified with fibroid uterus during pregnancy, incidence being 0.8%. Multiple fibroids were identified on ultrasonography size from 2cms to 12cms of which 32(59.2%) cases had more than5cms size fibroids.

History of polycystic ovarian syndrome was seen in 5cases, diabetes mellitus in 2cases.Majority belonged to age group between 25-30 years were about 31(57%), 32(59.2%) were primigravida, 18 cases (33.3%) had BMI more than 25 kg/m2,8 (14.81%) had spontaneous miscarriages,46 cases (85%) continued pregnancy, among them 28 (61%) underwent LSCS,18 (33.3%) vaginal deliveries (Table 1and Table 2).

The most common type of uterine fibroid was submucosal and intramural type in 28 (51.8%) cases (Table 1). Maternal complications included 4(8.6%) cases had malpresentation, 15 (32.6%) had pain abdomen, 6 (13%) had postpartum hemorrhage (PPH), and abruptio placenta in1(2.1%), low birth weight (<2.5kgs - including IUGR and preterm) seen in 16 (29.62%) of deliveries (Figure 1 and Figure 2). Blood transfusion given in 15(27.77%) cases.

Major neonatal outcomes in our study were NICU admissions 11(20.37%) and 1 (1.85%) neonate required resuscitation (Figure 3). No maternal and neonatal mortality seen in this study.

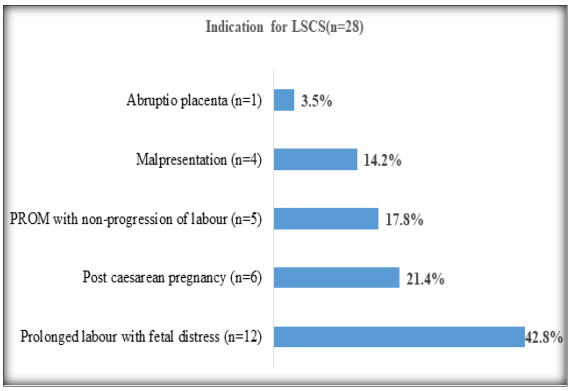

Figure 1: Obstetric outcome

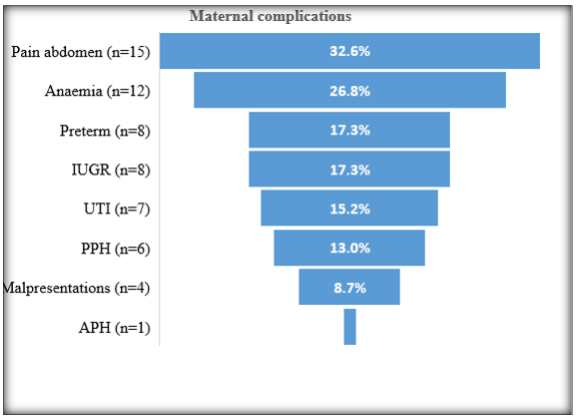

Figure 2: Maternal complications

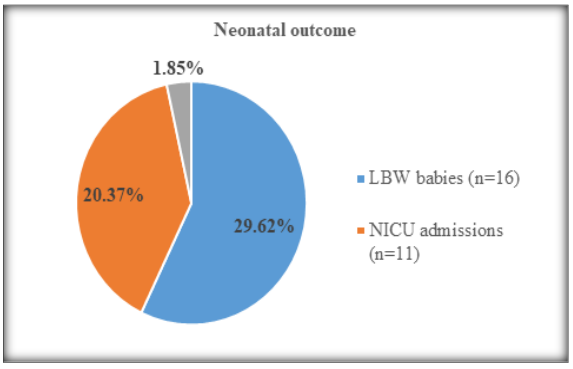

Figure 3: Neonatal outcomes

Table 1: Participants sociodemographic profile and baseline characteristics

Characteristics		No of cases (N=54)	Percentage
		n	%
Age	<25 years	7	12.9%
	25-30 years	31	57.4%
	>30 years	16	29.7%
Parity	Primigravida	32	59.2%

	Multigravida	22	40.7%
	History of Abortion	10	18.5%
Type of conception	Spontaneous	48	88.8%
	Ovulation induction	5	9.2%
	IVF	1	1.85%
Types of Fibroids	Submucosal and intramural	28	51.8%
	Intramural and subserosal	16	29.6%
	Submucosal ,intramural and subserosal	10	18.5%

Table 2: Progression of pregnancy, mode of delivery and obstetric outcomes

Obstetric Outcome		**No of cases (N=54)**	**Percentage**
Mode of delivery		n	%
	Spontaneous vaginal delivery	13	24.07%
	Instrumental vaginal delivery	5	9.2%
	LSCS	28	51.8%
Indication for LSCS	Malpresentation	4	14.2%
	Abruptio placenta	1	3.5%
	PROM with non-progression of labour	5	17.8%
	Prolonged labour with foetal distress	12	42.8%
	Post caesarean pregnancy	6	21.4%
Abortions	Less than 12 weeks	3	5.55%
	12- 18 weeks	5	9.25%
Live births	Low birth weight (<2.5kgs- including IUGR and preterm)	16	29.62%
	Term	30	55.5%

DISCUSSION

Pregnancy with fibroid uterus is globally on a rising trend because of advanced maternal ages and delays in conception. The size, location and number of the leiomyomas are the most important parameters that predict morbidity in pregnancy. The incidence of Leiomyomas complicating Pregnancy in Bhat.P, Patel study,[3] was 0.5% similar to present study 0.8%. Studies conducted by Sarwar al et,[4] and Poovathi et al,[5] majority were in 25-30 years of age similar to this study. Study conducted by Sankaran SM, Pillai JS,[6] observed 58.3% of cases with BMI above 25, compared to 18 (33.3%) cases in this study. Sridevi et al study,[7] (40%), in Jaideep M Palwade, Charushila S Borole,[8] study (71%) caesarean section was most common mode of delivery which is comparable with present study (61%). Multiple fibroids, large fibroids, fibroids in lower uterine segment are most common predisposing factors for caesarean delivery.[9] However, in our study no one required caesarean hysterectomy, as compared with Noor et al study,[10] (13.3%). Caesarean myomectomy should be avoided unless fibroid is in line of incision.

The risk of PPH in pregnancies complicated by fibroids has been reported in this study was 13% similar to studies conducted by Poovathi et al,[5] (18.5%), Sarwar et al (14%), Lam S J, Kumar et al (14%).[11] Dasgupta et al. study,[12] malpresentation were seen in 60% of cases unlike present study (8.69%), and 87% of patients required blood transfusion.

CONCLUSION

Pregnancy with uterine fibroids associated with various untoward obstetric outcomes such as spontaneous miscarriages, increased rate of caesarean section, PPH, need for blood transfusion and longer hospital stay. Complications are more pronounced with multiple submucosal and intramural fibroids. The risk of postpartum haemorrhage increases with the increasing number and size of the uterine fibroids. Pre-conceptional counselling, frequent antenatal visits, foetal growth follow-up by ultrasound, Blood and blood products availability and multidisciplinary team approach for planning delivery in tertiary care centres is essential for safe maternal and foetal outcome.

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