



## STUDY OF FETOMATERNAL OUTCOMES IN PATIENTS WITH UTERINE MYOMA IN A TERTIARY CARE CENTRE.

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**ABSTRACT** The incidence of fibroids in pregnancy ranges from 0.1-10.7% of all pregnancies. This study was carried out over a period of 3 years in 54 women, to assess the outcome of pregnancy in patients with uterine fibroids. Pregnant patients with fibroids undergoing Medical termination of pregnancy were excluded. Majority were 26-30 years, more frequent in primigravidae (64.81%) than multigravida (35.19%). 55.55% were term pregnancies and diagnosed by ultrasonography (85.19%). 40.74% of cases were terminated by caesarean section. Most myomas were intramural (68.54%), less than 6cm in size (79.62%) and were single (87.04%) in number. 29.63% had no complication during antenatal period, 74.09% had an uneventful delivery and 7.41% had fever during their puerperium. 42 babies delivered have good outcome, 2 babies had still birth, 4 babies were asphyxiated. A high degree of suspicion, diligent search during ultrasonography and proper management may decrease complications in cases of pregnancies with fibroid.

**KEYWORDS :** Myoma, uterine fibroids, fetomaternal outcome.

### INTRODUCTION

Fibroid, myoma, and leiomyoma are synonymous to define the most common benign solid tumour of the female genital tract, whose prevalence increases with age, peaking in women in their 40s. The exact incidence is difficult to calculate, as they may be asymptomatic and diagnosed only incidentally. However, up to 50% that are asymptomatic may have significant social and economic impact, and may affect women's quality of life negatively [1]

Pregnancy with fibroids, and fibroids with pregnancy, apparently are similar terms but need to be differentiated. The former term should imply detection of fibroids for the first time in pregnancy (whether by diagnostic modalities like USG, or palpation, or at caesarean section) while the latter term should imply that fibroids were diagnosed prior to pregnancy [2].

The incidence of fibroids in pregnancy ranges from 0.1-10.7% of all pregnancies [3]

Incidence of fibroids increases with maternal age.

Women who are older than 35 years of age and in nulliparas are especially at risk [4]. Fibroid less than 5 cm in diameter tend to remain stable or decrease in size [5-7] and, larger fibroids (>5 cm) tend to grow during the pregnancy [7]. The risk of adverse events in pregnancy increases with the size of the fibroid [8].

Fibroids may grow, regress or remain unchanged in size during pregnancy. Though in some cases it does not affect the outcome of pregnancy but they are associated with complications like preterm labour, IUGR, abortion, PROM, uterine dysfunction, placental abruption, and obstructed labour, increased risk of caesarean delivery, breech presentation, malposition. [9] These complications are more commonly seen with large submucosal and retroplacental fibroids [8]

Pregnancy itself has wide ranging impacts on uterine fibroids, and these include an increase in the size of the fibroids in 20-30% of cases, torsion of the uterine fibroids if pedunculated, infection, red degeneration, expulsion (if pedunculated and submucous) and necrosis [10-13]. These generally impact negatively on the pregnant woman, leading to increased morbidity, and sometimes hospitalization [14]. This leads to increase in medications and the possible effects of these drugs on the pregnant woman and the developing fetus could be adverse. A common clinical feature of uterine fibroids is menorrhagia, which could lead to anemia. If a woman with uterine fibroids and anemia becomes pregnant, the further impact of anemia in pregnancy could be deleterious to the woman and the unborn child. However, some uterine fibroids do cause polycythemia because of the elaboration of erythropoietin [15]. 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 [11-13]. In this context,

this study was planned to assess the outcome of pregnancy in patients with uterine fibroids involving Indian population and this study has been taken up to examine the cases of fibroids with pregnancy, their incidence, effect on size of fibroid, complications, maternal and perinatal outcome.

### METHODOLOGY

This present study is a hospital based descriptive study. It was carried out over a period of 3 years (from 20.06.2015 to 20.06.2018) in 54 women admitted with the diagnosis of pregnancy with fibroid in the department of Obstetrics and Gynecology at a tertiary care hospital i.e. S.C.B. Cuttack, Odisha India. Detailed clinical, obstetric, infertility and relevant past history was taken. On clinical examination disparity in uterine size and gestational age was noted. Ultrasonography was done at the time of booking visit. Subjects with fibroid were included in this study. These women were thoroughly interrogated & investigated and followed till end of puerperium. Observations were recorded and analysed. Pregnant patients with fibroids undergoing Medical termination of pregnancy were excluded from the study.

### RESULTS

54 women who were having pregnancy with uterine leiomyomata were included in this study. Total number of confinements (delivery and abortion) during the period of study was 20540. Total number of delivery during the period of study was 13040. The incidence of fibroid with pregnancy was approximately 1 per 241 deliveries.

A major proportion was in the younger age group of 26-30 years. Fibroids were more frequent in primigravidae 35 (64.81%) than multigravidae i.e. 19 (35.19%).

22 patients (40.74%) had less than 3 antenatal visits, 2 patients (3.70%) had no antenatal check-up and 30 patients (55.56%) had 3 or more antenatal check-up.

Out of 54 women, first trimester and second trimester abortion are 3 (5.55%) and 1 (1.87%) respectively. Most of the pregnancies with fibroid are term pregnancies 30 (55.55%) in this study. Most of the pregnancies with fibroid were diagnosed by ultrasonography (85.19%) in this study. Total number of caesarean section, for pregnancy with fibroid much significant in number (40.74%) though normal delivery with instrumentation predominates the number of caesarean section (Table 1).

**Table 1:**

PARAMETER	N=54	PERCENTAGE (%)
AGE		
<20yrs	1	1.87
20-25yrs	16	29.62
26-30yrs	25	46.30
31-35yrs	10	18.51
>35yrs	2	3.70

GRAVIDA	Primigravida	35	64.81
	Multigravida	19	35.19
ANC	Nil	2	3.70
	<3	22	40.74
	>=3	30	55.56
TIME OF DIAGNOSIS OF FIBROID (WEEKS)	<12	3	5.55
	13-20	1	1.87
	21-28	2	3.70
	29-36	18	33.33
	>36	30	55.55
MODE OF DIAGNOSIS OF FIBROID	Direct visualisation	6	11.11
	USG	46	85.19
	Clinical examination	2	3.7
MODE OF TERMINATION	Unaided vaginal delivery	20	37.03
	Forceps	4	7.41
	Ventouse	4	7.41
	Caesarean	22	40.74
	Abortion	4	7.41

Out of 54 cases, most of the myomas were intramural (68.54%), less than 6cm in size (79.62%) and were single (87.04%) in number in this study (Table 2).

**TABLE 2:**

PARAMETER		N=54	PERCENTAGE (%)
TYPE	Intramural	37	68.54
	Subserosal	8	14.81
	Submucosal	3	5.55
	Cervical	3	5.55
	Broad ligament	3	5.55
SIZE	<6cm	43	79.62
	6-10cm	9	16.68
	>10cm	2	3.70
NUMBER	Single	47	87.04
	Multiple	7	12.96

Table 3 shows maternal and neonatal complication of the patients included in the study. Most of the patients had no complication (29.63%) during antenatal period, 74.09% had an uneventful delivery and 4cases (7.41%) had fever during their puerperal period. Out of 54 cases, neonatal and perinatal outcome of 50 babies has been shown .4 pregnancies had been terminated before 20 weeks. Out of the remaining 50 cases , 42 babies delivered by pregnant women with fibroid have good outcome (84%).2babies had still birth, 4 babies were severely asphyxiated, out of which one succumbed to death.

**TABLE 3:**

PARAMETER		N=54	PERCENTAGE (%)
MATERNAL (ANTEPARTUM) COMPLICATIONS	No complication	16	29.63
	Anemia	11	20.37
	Abortion	4	7.41
	Red degeneration	2	3.70
	APH	4	7.41
	Malpresentation	6	11.11
	Preterm labor	4	7.41
	PROM	7	12.96
MATERNAL (INTRAPARTUM) COMPLICATIONS	No complication	40	74.09
	Prolonged labor	1	1.85
	Obstructed labor	2	3.70
	chorioamnionitis	1	1.85
	Rupture uterus	2	3.70
	Retained placenta	2	3.70
	Severe PPH	4	7.41
	Caesarean hysterectomy following uncontrollable PPH	2	3.70
MATERNAL (POSTPARTUM) COMPLICATIONS	No complication	46	85.19
	Pyrexia	4	7.41
	UTI	2	3.70
	Sepsis	1	1.85
	Secondary PPH	1	1.85

PARAMETER		N=50	PERCENTAGE(%)
NEONATAL COMPLICATIONS	Still birth	2	4
	HIE	4	8
	Septicemia	1	2
	Early neonatal death	1	2
	Late neonatal death	-	-
	Healthy	42	84

**DISCUSSION**

This study was conducted to assess the fetomaternal outcome and complications in pregnancies with leiomyomas.

Sheiner and Co-workers (2004) cited an incidence of fibroids with pregnancy 0.65% in approximately 1,06,000 cases[18]. Quidwai GI (2006), 15,104 women underwent routine second trimester prenatal ultrasonography and 401(2.7%) women were identified with at least 1 leiomyoma[3].The incidence of present study was 0.41% which was low because of small sample size.

We found that fibroids were more common in 26-30years of age which is consistent with the findings of S. Kore et al. [19] who have reported 44% of cases between 26 to 30 years of age group. In the present study fibroids are less frequent in multigravidae compared to primigravidae. This is in contrast with earlier studies by Noor et al., [17] (73.33% multigravida and 23.66% primigravida) and Sarwar et al., [20] (63% multigravida and 37% primigravida). Regarding obstetric complications, in our study, first trimester and second trimester abortion are 3(5.55%) and 1(1.87%) respectively. High incidence of abortions in patients with fibroids is in agreement with results from earlier studies [20, 21]. The proposed mechanism is compressed endometrial vascular supply, affects the fetus adversely resulting in abortion .Matsunga and Shiota[22] have found a two fold increase in the number of malformed embryos recovered from patients with uterine fibroids having termination of pregnancy.

Most of the pregnancies with fibroid are term pregnancies 30 (55.55%) in this study. Similar results were obtained in a study by B.H .Radhika et al., [23].The results of the present study were in contrast to results obtained by Sarwar et al., (33.3% of preterm deliveries.)[20]

This study had 40.74% caesarean deliveries , which was in contrast to previous studies [15, 24].

This study had 87.04% of single fibroid which is comparable with previous study in which out of 12,500 cases 88% of them were single fibroids. [24]

Sulochana K studied 8cases of pregnancy with fibroid during caesarean myomectomy, one was pedunculated fibroid, 6 were intramural, 2 had multiple intramural. The fibroid ranged from 10-13cm in diameter. This study had 37 intramural and 5 multiple intramural myomas. The size of the fibroids ranged from 2-12cm.

We reported slightly increased incidence of PROM, (12.96%) compared to Sarwar et al., (10%) but slightly less than a study by B.H .Radhika et al., (20%) [20, 23]. Anaemia was found in eleven patients (20.37%), comparable with study by Noor et al., (20.6%) [17] But slightly less than a study by B.H .Radhika et al. (26.6%)[23]

This study had complications of PPH (11.11%), Preterm labour (7.41%), malpresentation (11.11%).

In our patient population, 6 patients (11.11%) had PPH, which was less as compared to study by Noor et al., (33.3%) ,B.H .Radhika et al.,(33.3%) and Lam et al.,(14%), [17,23,25]. Postpartum hemorrhage is due to decrease of force of uterine contractions because of fibroids in myometrium or because of disruption of the coordinated spread of contractile wave, there by leading to dysfunctional labour.

2patients(3.70%) in our study required caesarean hysterectomy, as compared to13.33% in Noor et al., study [12], Caesarean myomectomy should be avoided unless fibroid is in line of incision. Two of our patients underwent caesarean myomectomy,

**CONCLUSION:**

This study was carried out on 54 patients aged between 19 to 36 years in the department of Obstetrics and Gynecology, SCB Medical

Maximum number of cases of pregnancy with fibroid were 26 to 30 years of age group and most were nulliparous. Ultrasonography was prime method of diagnosis for pregnancy with fibroid. Majority of myomas were intramural, less than 6cm in size and single in number. Most of the pregnancies with fibroid having no symptoms or effect on pregnancy outcome. Spontaneous abortions are more common with submucous and broad ligament fibroids. Preterm labour, premature rupture of membrane, APH (abruptio mainly) occurred during antepartum period. Complications like prolonged labour, obstructed labour, chorioamnionitis developed during labour and severe postpartum haemorrhage following third stage of labour in myomas >10cm. Red degeneration occurred in two cases in third trimester, symptoms subsided with conservative management without significant effect on babies. The study had two caesarean myomectomies, there was severe haemorrhage in one case of twin pregnancy which was controlled.

Big myomas/submucous myomas were associated with poor neonatal and perinatal outcome. The perinatal complications of pregnancy with fibroid had 2 still births, 4 Hypoxic Ischemic Encephalopathy out of which one baby succumbed to death, other 3 babies survived. Majority were healthy babies and were discharged.

A high degree of suspicion, diligent search during ultrasonography examination especially in elderly patients and proper management may decrease both maternal and fetal complications in cases of pregnancies with fibroid.

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