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A study of maternal and fetal outcome in fibroid complicating pregnancy

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Abstract

Introduction: Leiomyomas are the most common benign smooth muscle tumours of the uterus in the reproductive age group. Incidence of fibroid in pregnancy is between 1-2% ^[1]. Risk of complications increase with increase in the size of fibroid.

Aim: The aim of our study was to evaluate the incidence, maternal and fetal outcomes in pregnancies complicated with fibroids. The present study was conducted in the Department of OBG, NRI medical college, Chinakakani, a tertiary care hospital, Andhra Pradesh.

Materials and methods: This was a retrospective observational study conducted over a period of 4 years i.e., January 2017 to Aug 2020. Total 50 pregnant women with fibroid >3cm were included in the study. Maternal age, parity, gestational age, past history of myomectomy, complications during pregnancy, mode of delivery and caesarean myomectomy were the criteria noted.

Results: The incidence of fibroid complicating pregnancies in our study was 0.78%. Majority of women were multigravidae (66%) and belong to the age group 31 to 35 (38%). Most of the cases were diagnosed in 1st trimester and only 12% of cases had previous history of myomectomy. Though asymptomatic cases form a major group, maternal complications include abortion (4%), APH(6%), pain abdomen (12%), PROM and preterm labour (10%), PPH (20%). Fetal complications include FGR (12%), LBW (12%). Caesarean section was the most common mode of delivery (58%). Caesarean myomectomy was done in only 17.8% of the women.

Conclusion: Majority of fibroids during pregnancy were asymptomatic, increased risk was seen with increase in size of fibroids. Prompt ante-partum, intrapartum and post-partum surveillance and management helps in combating these complications. Myomectomy in selected cases results in better obstetric outcome.

Keywords: Fibroid in pregnancy, Caesarean section, Myomectomy

Introduction

Uterine fibroids/Leiomyoma are the benign smooth muscle tumours of the uterus. Incidence in reproductive age group varies from 20%-50% ^[1]. Incidence in pregnancy ranges from 0.1%-10% ^[2]. Reproductive age group women with fibroids are found to be associated with menstrual disorders, pelvic pain, sub fertility and obstetric complications / bad obstetric outcome. Obstetric complications associated with fibroids in pregnancy include miscarriage, preterm labour, APH, red degeneration, malpresentation, malposition, FGR, LBW, PPH and increased incidence of operative deliveries and caesarean hysterectomy. It appears that ovarian steroids are responsible for the growth of uterine fibroids during pregnancy ^[3]. Conservative medical management during pregnancy is the first choice, as pregnancy preserving myomectomy is mostly dangerous due to the risk of pregnancy loss or haemorrhage and hysterectomy ^[4]. Complications are most common with submucosal and retroplacental fibroids ^[2, 5]. Though caesarean section rate is higher with fibroids in pregnancy, trial of labour is not considered a contraindication. Caesarean section rate is most common with large fibroids and fibroids located in lower uterine segment and cervix resulting in labour dystocia and obstructed labour.

The objective of this study was to evaluate the effect of fibroids on obstetric; maternal and fetal outcome and effect of pregnancy on the growth and subsequent management of these fibroids during pregnancy and immediate post-partum.

Materials and Methods

The present study was conducted in Department of OBG, NRI medical college, Chinakakani, a tertiary care hospital, Andhra Pradesh from Jan 2017 till Aug 2020.

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The cases of fibroid complicating pregnancy >3 cm size and those diagnosed before and during pregnancy were included. (N=50).

All 50 patients were followed up clinically and by USG during pregnancy. Data analysed under the criteria of age, parity, gestational age (trimester-wise), complications, mode of delivery and caesarean myomectomy.

Results

During the period of study, there were total 6400 deliveries in our hospital. Out of these, 50 fibroid complicating pregnancies were noted. Thus the incidence of fibroid complicating pregnancy was 0.78%.

Table 1: Age of the patient

Age (years)	Number (N=50)	Percentage (%)
20 to 25	10	20
26 to 30	14	28
31 to 35	19	38
>36	7	14

Table 2: Parity

Parity	Number(N=50)	Percentage (%)
Primi	17	34
Multi	33	66

Table 3: Gestational age

Gestational age	Number (N=50)	Percentage (%)
First trimester	38	76
Second trimester	9	18
Third trimester	3	6

Table 4: History of Myomectomy

	Number (N=50)	Percentage (%)
History of Myomectomy	6	12

Table 5: Maternal complications

Maternal complications	Number (N=50)	Percentage (%)
Asymptomatic	18	36
Abortion	2	4
APH	3	6
Pain abdomen	6	12
PROM / PTL	5	10
Placental problems	2	4
Malpresentation / Malposition	10	20
PPH	10	20
Peri-Partum Hysterectomy	-	-
Blood transfusions	12	24

Table 6: Fetal Complications

Fetal complications	Number (N=50)	Percentage (%)
FGR	6	12
LBW	6	12
Malpresentations /Malpositions	10	20

Table 7: Mode of delivery

Mode of Delivery	Number (N=48)	Percentage (%)
Normal Delivery	20	41.6
Caesarean Section	28	58.3
Elective	19	39.58
Emergency	9	18.75

Out of 50 cases, 2 had spontaneous abortion.

Table 8: Caesarean Myomectomy

	Number (N=28)	Percentage (%)
Caesarean myomectomy	5	17.8

Discussion

Presence of fibroids in pregnancy is potentially a serious problem. Though majority of women are asymptomatic, many of the women present with varied problems and complications.

The incidence of fibroids in our study is 0.78% which is on par with the incidence of 0.1 to 2%, though slightly higher than Maliwad A K *et al* [6] and lower than Rong Zhao *et al* (2.68%) [7]. This shows that even USG examination does not pick up all the cases of fibroids in pregnancy, thus most of them are undiagnosed. Majority of the cases are multigravida which is comparable with Sharma V *et al* [11] and most commonly diagnosed during first trimester which is contrary to Maliwad AK *et al* [6] but on par with Kore S *et al* [8]. Thus, diagnosis of fibroids during pregnancy becomes a diagnostic dilemma and also the size varies with the period of pregnancy. Most of the fibroids increase in size due to maternal hormones. As with Shahida J *et al* [9], most of the cases with fibroids complicating pregnancy are asymptomatic, i.e., 36%. The incidence of abortions in our case study is 4%. The proposed mechanism is compressed endometrial vascular supply, affecting the fetus adversely resulting in abortion [10, 11]. Some patients may have more complications – maternal / fetal. In our study, maternal complications like pain abdomen (12%), APH (6%), PROM/PTL (10%), PPH (20%) were on par with or slightly higher than most of the studies [9, 8, 6]. Fetal and neonatal complications like FGR (12%), malpresentation and malposition (20%) and LBW (12%) correlate with Maliwad A K *et al* [6].

None of our patients required peripartum hysterectomy. Prompt antenatal diagnosis, preparedness, management of PPH and availability of blood transfusions helped in combating the need for a hysterectomy. In our study, most of the patients underwent caesarean section i.e., 58%. In various studies rate of caesarean section ranges between 34 - 73% [8, 12-14]. Multiple fibroids, large fibroids, fibroids in lower uterine segment are most common predisposing factors for caesarean delivery [15]. In the present study caesarean myomectomy was done in 5 cases i.e., 17.8% of the caesarean sections, wherein it was 11% in study by Maliwad A K *et al* [6]. Myomectomy during caesarean section can be performed in selected patients depending on the size, position, involvement of lower uterine segment, type of fibroid like pedunculated/subserosal fibroids. The reasoning behind the myomectomy at caesarean section is that uterus in the immediate postpartum period is better adopted physiologically to control haemorrhage than at any other stage of women's life [5, 6].

Conclusion

All pregnant women are to be carefully screened for the presence of fibroids, size/ location/ type. Presence of fibroids during pregnancy are associated with various adverse maternal and fetal outcomes. There is high rate of caesarean section with fibroid complicating pregnancy. Selected patients can be benefitted from caesarean myomectomy and thus better pregnancy outcome.

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Conflict of Interest

None

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