Original Article

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Maternal and Fetal Outcome in Pregnancy with Fibroids: A Prospective Study

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Abstract

Background: Fibroid (myomas) is the most common benign tumors of the uterus. Complications occur in approximately 10-40% in the presence of fibroids. The aim of our study was to evaluate the maternal and fetal outcome in antenatal women with fibroids.

Methods: A prospective study was carried out over a period of 1-year in 30 women admitted with the diagnosis of pregnancy with fibroid. Duration of study was from 1.08.2014 to 30.07.2015, 1 year in a tertiary care medical college hospital, Raja Mirasdar Hospital attached to Thanjavur Medical College, Thanjavur, Tamil Nadu, India. Routine basic investigations were done for all the women included in the study. Ultrasonogram was done at booking visit and during subsequent visits to assess the increase in the size of the fibroid and degeneration and other obstetric complications such as malpresentation and placenta previa.

Results: Major proportion was in the younger age group of 25-35 years. Fibroids were more frequent in multigravidae 22 (73.3%), and primigravidae were 8 (26.6%). The reported incidence of fibroid in pregnancy ranges from 0.01%-10.7%. 10 (33.3%) women were asymptomatic during pregnancy. Out of 30 women, 10 (33.3) were known the case of fibroid became pregnant, remaining 20 (66.6%) were diagnosed as having fibroid during routine antenatal visits. 7 women (23.3%) had pain, 4 of them (13.3%) had threatened preterm labor, 3 (10%) had spontaneous miscarriage, and 3 (10%) had anemia, and placenta previa was diagnosed in 3 patients (10%). 27 women (90%) were crossed 37 completed weeks of gestation. Out of 27, 8 (29.6%) women had vaginal delivery, outlet forceps applied in one woman (3.7%), and ventouse applied in one woman (3.7%). Lower segment cesarean section done in 16 women (59.2%), and cesarean hysterectomy proceeded in one woman (3.7%).

Conclusion: Pregnancies with fibroids are associated with complications during the antepartum, intrapartum, and postpartum period. They need frequent follow-up and evaluation. Most of the fibroids are asymptomatic but may adversely affect the course of pregnancy and labor depending on their location and size.

Key words: Fibroid, Leiomyoma, Myoma, Myomectomy, Obstetric complications

INTRODUCTION

Myomas are a common benign smooth muscle tumor of the uterus. They are found in approximately 35-77% of women of reproductive age.[1] They have been found to be associated with menstrual disorders and pelvic pain and can negatively affect fertility and pregnancy outcome. The reported incidence of fibroids in pregnancy ranges from 0.1 to 10.7% of all pregnancies.[2] Incidence of fibroids increases with maternal age who are older than 35 years of age and in nulliparas.[3] Pregnant women with myoma are at increased risk of cesarean delivery, breech presentation, malposition, and preterm delivery. Fibroid <5 cm in diameter tend to remain stable or decrease in size[4-6] and, larger fibroids (>5 cm) tend to grow during the pregnancy.[6] The risk of adverse events in pregnancy increases with the size of the fibroid. Different complications with variable rates of incidence have been reported in pregnancy with fibroids which include antepartum hemorrhage, acute abdomen, laparotomy, preterm labor, feto-pelvic disproportion, malposition of the fetus, retention of the placenta, postpartum hemorrhage (PPH), red degeneration, dysfunctional labor, retained placenta, and retained products of conception, intrauterine growth restriction.[7-11] These complications are more commonly seen with large submucosal and retroplacental fibroids.[12] Even though

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there is higher cesarean section rate in women with fibroids, the presence of uterine fibroids should not be regarded as a contraindication to a trial of labour.[13] Cesarean rate is higher particularly in women with large fibroids.

METHODS

The present study was a prospective study carried out over a period of 1-year on 30 women admitted with the diagnosis fibroid with pregnancy. The study period was from 1.08.2014 to 30.07.2015 for the period of 1-year in a Tertiary Care Medical College Hospital, Raja Mirasdar Hospital attached to Thanjavur Medical College, Thanjavur, Tamil Nadu, India. During our study period, the total number of deliveries were 14199, and a total number of antenatal outpatients were 39490, and the incidence in the hospital is 0.075%. Ultrasonogram done at booking visit and patients with fibroid of 5 cm and above were included in the study. The mean age group was 28 years. In our study, 8 were primigravidae and 22 were multigravidae. Out of 8 primigravidae, 2 women were with larger fibroid more than 15 cm and other 6 were with fibroids of <7 cm and between 5 and 7 cm one had multiple fibroids and remaining 7 were with single fibroid. All the primigravidae were diagnosed during routine antenatal booking visits. Among 22 multigravidae, 7 had multiple fibroids more than 3 in number and 15 had a single fibroid. Out of 22 multigravidae, 10 were referred from outside and 12 were diagnosed at our hospital.

RESULTS

Myomas are the most common benign smooth muscle tumors of the uterus. They have been found to be associated with pain, degeneration and can negatively affect fertility and pregnancy outcome. In our study, we included 30 women who were having pregnancy with uterine fibroids. We included 30 women who were having pregnancy with fibroids. Women with fibroids of more than 5 cm were included in the study. A major proportion was in the younger age group of 25-35 years (Table 1). The mean age in our study population is 29.5 years. Fibroids were more frequent in multigravidae 22 (73.3%), and primigravidae were 8(26.6%) (Table 2). The reported incidence of fibroid in pregnancy ranges from 0.01% to 10.7%. In our study, the incidence is 0.075%. 10 (33.3%) women were asymptomatic during pregnancy. Out of 30 women, 10 (33.3) were known the case of fibroid became pregnant, remaining 20 (66.6%) were diagnosed as having fibroid during routine antenatal visits (Table 3). 7 women (23.3%) had pain, 4 of them (13.3%) had threatened preterm labor, 3 (10%) had spontaneous miscarriage, and 3 (10%) had anemia, and placenta previa was diagnosed in 3 patients (10%) (Table 4). 27 women (90%) were crossed 37 completed weeks of gestation. Out of 27, 8 (29.6%) women had a vaginal delivery, outlet forceps applied in one woman (3.7%), and ventouse applied in one woman (3.7%). Lower segment cesarean section (LSCS) done in 16 women (59.2%), and cesarean hysterectomy proceeded in one woman (3.7%) (Table 5). Indications for LSCS were breech presentation in 2 (7.4%) women, 2 women were with post-cesarean pregnancy (7.4%) transverse lie in 2 (7.4%), placenta previa in 3 (11.1), premature rupture of membranes (PROM) with poor bishops score in 2 (7.4%), uterine inertia in 3 (11.1%), and non-progressive labor in 3 (11.1%) (Table 6). 5 (18.5%) had PPH and myomectomy

Table 1: Age of study population (*n*=30)

Age in years	*n*=30	Percentage
20-25	5	16.6
26-30	10	33.3
31-35	13	43.3
>36	2	6.61

Table 2: Parity wise distribution (*n*=30)

Gravidity	*n*=30	Percentage
Primigravida	8	26.6
Multigravida	22	73.3

Table 3: Duration of gestation at diagnosis (*n*=30)

Gestational age (weeks)	*n*=30	Percentage
Pre-pregnancy diagnosis	10	33.3
<12	12	40
13-20	3	10
21-28	3	10
29-36	2	66

Table 4: Complication during pregnancy (*n*=30)

Complication	*n*=30	Percentage
Asymptomatic	10	3.3
Spontaneous miscarriage	3	10
Pain abdomen	7	23.3
PP	3	10
Threatened PTL	4	13.3
Anemia	3	10

PP: Postpartum, PTL: Preterm labor

Table 5: Mode of delivery (*n*=27)

Mode of delivery	*n*=27	Percentage
SVD	8	29.6
Outlet forceps	1	3.7
Vacuum application	1	3.7
LSCS	16	59.2
Cesarean hysterectomy	1	3.7

SVD: Spontaneous vaginal delivery, LSCS: Lower segment cesarean section

Table 6: Indication for LSCS (*n*=17)

Elective cesarean section	*n*=17	Percentage
Malpresentation	4	14.8
Placenta previa	3	11.1
Post-cesarean pregnancy	2	7.4
PROM with poor Bishop score	2	7.4
Uterine inertia	3	11
Non progressive labor	3	11.1

PROM: Premature rupture of membranes, LSCS: Lower segment cesarean section

done in 3 (11.1%) patients. All 27 babies were with weight above 2.5 kg with good Apgar score. There was no perinatal and maternal mortality in our study.

DISCUSSION

We have conducted this study to evaluate the maternal and fetal outcome in 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]

In our study, we found that fibroids were less frequent in the first primigravidae compared to multigravidae. This is inconsistent with earlier studies by Sarwar *et al.*[14] (63% multigravida and 37% primigravida). Regarding obstetric complications, in our study, 3 out of 30 patients (10%) had a spontaneous abortion. High incidence of abortions in patients with fibroids is in agreement with results from earlier studies.[9] The proposed mechanism is compressed endometrial vascular supply, affects the fetus adversely resulting in abortion.[9] In our study, 7/30 (23%) had pain abdomen, which is inconsistent with earlier studies.[9,14]

Pain is the most commonly reported complaints and is seen most often in women with larger fibroids (more than 5 cm) during 2nd and 3rd trimesters of pregnancy. Fibroids may grow quickly and cause intense pain during pregnancy.[8] Patients with pain were managed conservatively. 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.[15]

Though 4/30 (13.3%) patients had a history of threatened preterm labor during pregnancy, all the four patients had continued their pregnancy until term. The incidence of preterm delivery was nil in our study compared to study by Sarwar *et al.* (33.3%).[14] The incidence of PROM, (4/30, 14.8%) is slightly higher in our study when compared to Sarwar *et al.* (10%). 3 patients (10%) had anemia.

Regarding the mode of delivery, 10 patients (37.03%) had spontaneous onset of labor and vaginal delivery. Out of 27 patients, 17 had LSCS (63%). Women with fibroids have a 3.7 fold increased risk of cesarean delivery. Cesarean incidence in our study is similar to studies by Klatsky *et al.*[9]

Indications for LSCS were breech presentation in 2 (7.4%) women, transverse lie in 2 (7.4%), placenta previa in 3 (11.1), PROM with poor bishops score in 4 (14.8%), uterine inertia in 3 (11.1%), and non-progressive labor in 3 (11.1%). 5 (18.5%) had PPH and myomectomy done in 3 (11.1%) patients. Among women, transverse lie in 2, placenta previa in 3 (11.1), PROM with poor bishops score in 4 (14.8%), uterine inertia in 3 (11.1%), and non-progressive labor in 3 (11.1%). In our study, 5/27 (18.5%) had PPH, which is slightly high, compared with 14% in the study by Lam *et al.*[16] and myomectomy done in 3 (11.1%) patients.

Among 3 cases of myomectomy, one patient was a primigravida with myoma of 30 cm × 30 cm in the lower segment of the uterus more close to the line of the incision and was easily removed, and approximation of the uterine wound was also perfect after removal of the fibroid. The second case of myomectomy was a multigravida with a very large subserous fibroid of 30 cm × 35 cm in fundus of uterus in the anterior wall and it was removed without any difficulty.[7] The third case of myomectomy was a multigravida with previous cesarean delivery and the fibroid of 10 cm size located in the vicinity of lower uterine segment scar and was easily shelled out during surgery. During surgery blood transfused for all 3 myomectomies. Post-operative blood transfusion was not needed in all three. Before proceeding myomectomy, bilateral uterine artery ligation was done in all three myomectomies. All 3 were genuine indications for myomectomy.[17] No case of placental abruption and only one woman with very large fibroid and uncontrolled PPH ended up in cesarean hysterectomy in our study.

All 27 babies were with weight above 2.5 kg with good Apgar score. There was no perinatal and maternal mortality in our study.

CONCLUSION

Pregnancies with fibroids are associated with complications during antepartum, intrapartum, and PP period. They need frequent follow-up and evaluation. Most of the fibroids are asymptomatic, but may adversely affect the course of pregnancy and labor depending on their location and size. These pregnancies are associated with increased incidence of cesarean delivery and PPH and considered as high risk.

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