

Myomas Complicating Pregnancy

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Abstract: Background: Uterine leiomyomas are benign smooth muscle tumors of uterus. They are present in approximately 20-50 % of women of reproductive age. Myoma complicating pregnancy is a high risk pregnancy which may lead to complication with unequal gravity. Objective of this study was to assess the prevalence and obstetric complications of fibroids during pregnancy in the obstetrics department of government general hospital Vijayawada, during a period of two years. Method: data of all patients who presented with fibroid during pregnancy during two years i.e., from January 2014 to December 2015 was recorded on a proforma and analyzed. Results: 14 patients were diagnosed to have fibroid during pregnancy out of 13037 deliveries, thus prevalence was 0.11 % in our hospital. The age of majority of cases 57.15% was form 20-25 years, 35.71% of cases was from 26-30 years, 7.14 % of cases was above 30 years. Prevalence of fibroids was equal i.e., 50% in both primi gravida and multi gravida. 71.43 % of cases reached term, 14(28 %) cases were between 29 weeks to 36 weeks of gestation. 14 (85.71%) (Patients were delivered by cesarean section, 1(7.14%) patient underwent hysterotomy for low lying placenta (type III placenta previa) and 1(7.14%) patient underwent subtotal hysterectomy for scar rupture. Fetal distress (5, 35.71%) and cephalo pelvic disproportion (4, 28.57%) were the commonest indications for cesarean section, next was myomectomy scar (2, 14.28%) mal presentation (breech) (1, 7.14 %), low lying placenta (1, 7.14%), scar rupture (1, 7.14%) were the indications for cesarean section. Anemia was the commonest complication (8, 57.15%) followed by fetal distress (4, 28.57%), cephalopelvic disproportion (3, 21.43%), post partum hemorrhage (3, 21.43%), IUGR (2, 14.28%) mal presentation (breech 1, 7.14 %), low lying placenta (1, 7.14%) and premature rupture of membranes (1, 7.14 %). Neonatal outcome was encouraging, average birth weight was seen in 8, 57.15 %, low birth weight in 3, 21.43%, large babies in 2, 14.28%, still birth in 1, 7.14 %, neonatal death in 1, 7.14 % patients. Conclusion: fibroids with pregnancy have long been implicated as a cause of adverse pregnancy events. Although fibroids are associated with increased complications during pregnancy management is recommended. Pregnancy with fibroids is associated with increased cesarean section rate and post partum hemorrhage. Obstetrician dealing with such patients should be well experienced to deal with any untoward events during management.

Keywords: fibroid, leiomyoma, pregnancy.

I. INTRODUCTION

Uterine leiomyomata are benign smooth muscle tumors of the uterus¹. They are present in approximately 20-50 % of women of reproductive age², but the actual prevalence of uterine fibroid tumors is found to be as high as 80 % when the pathological examinations of removed uterus was done³. Presence of myoma during pregnancy is potentially a serious problem and of frequent clinical concern since fibroids are commonly detected in women of reproductive age⁵, and have long been implicated as a cause of adverse pregnancy outcome. The incidence of myoma during pregnancy is 1-4 % and the cited range depends on the frequency of routine sonography and population characteristics. The stimulatory effects of pregnancy on myoma growth are unpredictable and can be impressive. These tumors respond differently in individual women and may grow, regress or remain unchanged in size during pregnancy. Though in some cases it does not affect the outcome of pregnancy majority are associated with complications like abortion, preterm labour, IUGR, PROM, placental abruption, uterine dysfunction and obstructed labour^{6,7}. So careful monitoring of the patient is needed during antenatal, intranatal and post natal period. However there are no well designed studies that provide adequate data on fibroids and pregnancy outcome.

This cross sectional study was carried out to determine the prevalence of fibroids during pregnancy and associated complications during pregnancy, delivery and the puerperium (antenatal, intra partum and post natal period).

II MATERIAL AND METHODS

This study was carried out in the department of Obstetrics and Gynecology, Siddhartha Medical College, Vijayawada, Andhra pradesh, India over a period of 2 years from January 2014 to December 2015. All patients who presented in the labour ward with a documented fibroid or were diagnosed during Caesarean Section with fibroid were included in the study. Demographic variables, pregnancy and labour complications,

mode of delivery, morbidity and mortality associated with the management of pregnancy with fibroids were recorded on a proforma.

Characteristics abstracted were age, parity, gestational age at the time of presentation, mode of delivery, complications associated with pregnancy with fibroids and its management, indications for cesarean section and neonatal outcome. Patients with fibroid uterus without pregnancy were excluded from the study.

III. RESULTS

During this period total number of deliveries 13037 and out of these 14 patients were diagnosed to have fibroids, thus prevalence was 0.11 %.

Table: 1: Demographic Profile

Age (Yrs)	Number	%
20-25	8	57.15 %
26-30	5	35.71 %
> - 30	1	7.14 %

Table-1 shows the demographic variables age. Majority of the patients were in the reproductive age range 20-25 years (57.15%) and 26-30 years (35.71%) only one patient was above 30 years age (7.14%).

Table: 2: Obstetric Profile

Parity	Number	%
Primi	7	50 %
Multi	7	50 %
Grand Multi	0	0

Table: 3

Gestational Age	Number	%
< 12 Weeks	1	7.14 %
13-20 Weeks	0	0
21-28 Weeks	1	7.14 %
29-36 Weeks	2	14.28 %
>36 Weeks	5	35.71 %
At C/S	5	35.71 %
		71.43 %

Table- 2 & 3 shows the obstetrical profile of the patients. Majority of the patients 71.43 % reached up to term. The prevalence was equal in primi gravida (50 %) and multi gravid (50%).

Table: 4

Mode of Delivery	Number	%	
Normal Vaginal Delivery	0	0	
Assisted Vaginal Delivery	0	0	
Caesarean Section	Emergency	8	57.15 %
	Elective	4	28.57 %
	Hysterotomy	1	7.14 %
	Hysterectomy	1	7.14 %

Table- 4 shows the mode of delivery. All most all 14 (85.71%) patients underwent cesarean operation. One patient 7.14 % underwent hysterectomy for type iii placenta previa and another patient (7.14 %) underwent subtotal hysterectomy for rupture of scar (myomectomy scar).

Table: 5 Complications

Complications	Number	%
Abortion	0	0
Anemia	8	57.15 %
PPH	3	21.43 %
Abruption	0	0
Low Lying Placenta	1	7.14 %
Still Birth	1	7.14 %
Cephalo Pelvic Dispropotion	3	21.43 %
Obstructed Labour	0	0
Retained Placenta	0	0
Mal Presentation-Breech	1	7.14 %
PROM	1	7.14 %
Fetal distress	4	28.57 %
IUGR	2	14.28 %

Cord Prolapse	0	0
Sub Total Hysterectomy	1	7.14 %

Table- 5 shows the complications of pregnancy with fibroid. Anemia was the commonest complication occurring in 8 (57.15%) of cases, followed by fetal distress 4 (28.57%), CPD-3 (21.43%), PPH-3 (21.43%), IUGR-2 (1.28%), breech presentation-1 (7.14%), low lying placenta-1, (7.14 %), PROM-1 (7.14%) and still birth-1 (7.14%) of patients.

Table: 6: Indications For Caesarean Section

Indications	Number	%
CPD	4	28.57 %
Fetal Distress	5	35.71 %
Mal Presentation	1	7.14 %
Low Lying Placenta	1	7.14 %
Post Myomectomy Scar	2	14.28 %
Scar Rupture	1	7.14 %

Table- 6 shows indications for caesarian section. Fetal distress was the commonest indication seen in 5, 35.71% of cases followed by cephalo pelvic disproportion in 4 (28.57%), post myomectomy scar in 2 (14.28%), breech presentation 1 (7.14 %), low lying placenta 1 (7.14%) and scar rupture 1 (7.14%).

Table: 7 Neonatal Outcome

Neonatal Outcome	Number	%
Low Birth Weight	3	21.43 %
Average	8	57.15 %
Macrosomic	2	14.28 %
Abortion	0	0
Fresh Still Birth	1	7.14 %
Low Apgar Score	0	0
Neonatal Deaths	1	7.14 %

Table- 7 shows the neonatal outcome, eight (57.15%) were of average birth weight, 3 (21.43%) were of low birth weight, 2 (14.28%) were of large babies. 1 patient had still birth (7.14 %) because of rupture of previous myomectomy scar, 1 patient had neonatal death (7.14%) who underwent hysterotomy for severe bleeding (type III placenta previa) at 28 weeks gestation. No abortion and no low apgar scores noticed in our small group of patients.

IV. DISCUSSION

Majority of patients who are diagnosed of complicated by fibroids were seen as emergency cases i.e., during caesarean section with no regular antenatal or routine ultrasound checkup in 1st and 2nd trimester. Therefore exact prevalence of fibroids during pregnancy cannot be calculated by these small numbers of patients who has ultrasound report and who were diagnosed having fibroids during caesarean section. The effect of uterine fibroids on fecundity and pregnancy outcome is difficult to determine with any degree of accuracy, this is due in large part to the lack of adequate large clinical trials¹. The potential effects of these tumors on pregnancy and that of pregnancy on the tumors are of frequent clinical concern since fibroids are commonly detected in women of reproductive age⁵. Uterine fibroids have long been implicated as a cause of adverse pregnancy events¹. Though in some cases it does not affect outcome of pregnancy. In many cases it leads to problems like abortion, preterm labour, other complications being premature rupture of membranes, placental abruption, uterine dysfunction, obstructed labour, mal presentations and mal positions, retained placenta, post partum hemorrhage, pain, degeneration, IUGR^{6,7,8}. The two factors most important on determining morbidity in pregnancy are leiomyoma size and location. The proximity of myoma to the placental implantation site is also a factor, specifically abortion, preterm labour, placental abruption and post partum hemorrhage all are increased if the placenta is adjacent or implanted over a leiomyoma. Common causes for spontaneous abortion are disturbances in blood flow, alterations in blood supply to the endometrium, uterine irritability, rapid growth or degeneration of leiomyoma. Poor placentation and mechanical obstruction to fetal growth account for pregnancy loss (abortion, preterm delivery, still birth) and IUGR.

The prevalence of fibroids in this study is 0.11% which is lower than that cited in the national and the international reports^{5,7,8,9}. This low figure suggest that majority of myomas are asymptomatic even in pregnancy and hence escape detection¹⁰. Exact prevalence cannot be obtained from this small number of patients as majority of patients lack antenatal care and mostly have no ultrasound reports. Sonography is helpful in evaluating the size, number, position, location and relationship to placenta and eccogenic structure of fibroids.

We found that fibroids are equally seen in primigravida and multigravida i.e., 50 % equal to that reported by kokab et al (52.25% in patients presenting in their first pregnancy) ⁸.

Majority of our patients presented at younger age 20-30 years (92.86%). This is similar to the findings in black women in whom there is nine fold increase incidence of fibroids.

Mechanical difficulties due to site of the fibroids may be encountered during labour and fibroids may be associated with mal presentation of the fetus. There is a fourfold increase of placental abruption and breech presentation, two fold increase of first trimester bleeding and dysfunctional labour¹² and six fold increase of caesarean delivery. The rate of caesarean section was 38-72.7 %. In this study the rates of caesarean section is 85.71%. The indications for caesarean section being fetal distress, cephalo pelvic disproportion, mal presentation, low lying placenta and previous myomectomy scar. Among which fibroids alone as the indication for caesarean section was 5 (35.71%).

If caesarean section is indicated myomas should be left alone unless they cause recalcitrant bleeding. It is unwise to attempt myomectomy because of associated vascularity of the procedure. Myomectomy is contraindicated unless there is intractable pain, and is safe when done in 1st and 2nd trimester. During intrapartum period elective myomectomy is strongly discouraged due to increased risk of hemorrhage, unless the presence of fibroid making adequate closure of the uterine incision impossible.

Incidence of post partum hemorrhage is high and is due to decrease of force of uterine contractions because of fibroids in myometrium or because of disruption of the coordinated spread of the contractile wave, there by leading to dysfunctional labour. In this study 3 (21.43%) had post partum hemorrhage. One patient with hemorrhagic shock came to our hospital diagnosed as placenta pravia type III, immediate hysterotomy was done. Intra mural fibroid of 10x8 cm was seen in right side. Patient had severe atonic PPH, intra uterine packing was done. In the reminder two cases mild atonic PPH was seen. Uterine artery ligation appears to be a promising method in reducing blood loss during caesarean section in patient with leiomyomas who want to conserve their fertility¹⁵. It has been reported that fibroids in the myometrium may decrease the force of uterine contractions or disrupt the coordinated spread of contractile wave there by leading to dysfunctional labour.

Neonatal outcome was encouraging. There was one still birth due to scar rupture and one neonatal death due to pre maturity 1.2 kg - 28 weeks gestation. The position of leiomyoma with respect to the placenta might predict the pregnancy outcome. Women who have fibroids detected in pregnancy may require additional fetal surveillance when placenta is implanted over or in close proximity to a fibroid¹³. Although most of the studies have reported an increase in incidence of spontaneous pregnancy loss in patients with fibroids, this association is strong if there are multiple fibroids¹¹ or the implantation has occurred in relation to a sub mucous fibroid¹⁴.

Fibroids have been associated with various complications during pregnancy. They may increase in size, undergo degeneration or torsion. Most fibroids remain uncomplicated and do not increase in size. Up to 10% undergo degeneration typically in the second trimester and is usually a self limiting process, occasionally requiring bed rest, adequate hydration and analgesia. The variation in size of fibroid is due to increase in progesterone level during pregnancy which actually may decrease apparent fibroid size. Rarely retention of urine and torsion of uterus can occur. Risk of post partum sepsis may be increased because of extensive necrotic degeneration of fibroid attributed to hormonal changes of pregnancy and puerperium.

V. CONCLUSION

Although fibroids are associated with increased complications during pregnancy, overall good maternal and neonatal outcomes are expected. Prophylactic intervention is seldom warranted and that surveillance during pregnancy with a referral to obstetrician is sufficient for most women with myomas. As pregnancies with fibroids are associated with increase caesarean section rate and post partum hemorrhage, the obstetrician dealing with such patients must be experienced to deal with any untoward events during management.

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