

ORIGINAL RESEARCH

Pregnancy outcome among pregnant women with uterine fibroids

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ABSTRACT

Background: The present study was conducted for assessing the pregnancy outcome among pregnant women with uterine fibroids.

Materials & methods: A total of 50 pregnant subjects were enrolled. Complete demographic and clinical details of all the subjects was obtained. Routine investigations were carried out in all the patients. Only those subjects were enrolled in the present study that had fibroids of more than 2 cm in diameter. They were followed during antenatal period clinically and scanned by ultrasonogram which was done at booking visit and during subsequent visits to assess the change in the size of the fibroid and other obstetric complications. Maternal age, parity, size of fibroid, complications during pregnancy, and mode of delivery were noted.

Results: Threatened miscarriage was seen in 24 percent of the subjects while preterm labor was seen in 20 percent of the subjects. Antepartum bleeding and abdominal pain needing admission was seen in 2 percent of the patients each. Postpartum haemorrhage was seen in 4 percent of the patients while one patient required blood transfusion. Spontaneous pregnancy was seen in 4 percent of the patients, while premature delivery was seen in 30 percent of the patients. Vaginal delivery and C section were seen in 6 percent and 94 percent of the patients. Congenital anomaly was seen in 4 percent of the patients while NICU admission was seen in 1 patient.

Conclusion: From the above results, authors concluded that pregnant subjects with fibroids were subjected to enhanced incidence of complications throughout antepartum, intrapartum, and postpartum period.

Key words: Pregnant, Uterine, Fibroids

INTRODUCTION

Uterine fibroids or leiomyomata are the most common benign tumor affecting women. An early 2003 study by Baird et al. showed that the estimated incidence of fibroids in women by age 50 was 70% for white women and reached over 80% black women. Fibroids originate from uterine smooth muscle cells (myometrium) whose growth is primarily dependent on the levels of circulating estrogen. Further information regarding the pathogenesis of fibroids is poorly understood. Fibroids can either present as an asymptomatic incidental finding on imaging, or symptomatically. Common symptoms include abnormal uterine bleeding, pelvic pain, disruption of surrounding pelvic structures (bowel and bladder), and back pain. Uterine fibroids typically are seen in three significant locations: subserosal (outside the uterus), intramural (inside the myometrium), and submucosal (Inside the uterine cavity). They can

further be broken down to pedunculated or not. Fibroids are classically diagnosed by physical exam and ultrasound imaging, which carries a high sensitivity for this pathology.¹⁻³

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 ante-partum haemorrhage, acute abdomen, laparotomy, preterm labour, foetopelvic disproportion, malposition of the foetus, retention of the placenta, postpartum haemorrhage, red degeneration, dysfunctional labour, retained placenta, and retained products of conception, intra uterine growth restriction (IUGR). These complications are more commonly seen with large submucosal and retroplacental fibroids. Despite the high incidence of all these adverse events during pregnancy, perinatal outcomes in these patients tend to be fair. Due to risk of all these complications pregnancy with fibroids has been a topic of research for many years.⁴⁻⁷ Hence; the present study was conducted for assessing the pregnancy outcome among pregnant subjects with uterine fibroids.

MATERIALS & METHODS

The present study was conducted for assessing the pregnancy outcome among pregnant subjects with uterine fibroids. A total of 50 pregnant subjects were enrolled. Complete demographic and clinical details of all the subjects was obtained. Routine investigations were carried out in all the patients. Only those subjects were enrolled in the present study that had fibroids of more than 2 cm in diameter. They were followed during antenatal period clinically and scanned by ultrasonogram which was done at booking visit and during subsequent visits to assess the change in the size of the fibroid and other obstetric complications. Maternal age, parity, size of fibroid, complications during pregnancy, and mode of delivery were noted. All the results were recorded and analysed by SPSS software.

RESULTS

A total of 50 subjects were enrolled. Mean age of the subjects was 33.9 years. 70 percent of the subjects were of Multigravida while 30 percent of the subjects were of primigravida. Mean duration of menstrual cycle per day was 28.6 while mean duration of menstrual period per day was 6.31. Threatened miscarriage was seen in 24 percent of the subjects while preterm labor was seen in 20 percent of the subjects. Antepartum bleeding and abdominal pain needing admission was seen in 2 percent of the patients each. Postpartum haemorrhage was seen in 4 percent of the patients while one patient required blood transfusion. Spontaneous pregnancy was seen in 4 percent of the patients, while premature delivery was seen in 30 percent of the patients. Vaginal delivery and C section were seen in 6 percent and 94 percent of the patients. Congenital anomaly was seen in 4 percent of the patients while NICU admission was seen in 1 patient.

Table 1: Maternal outcome

Maternal outcome	Number	Percentage
Threatened miscarriage (vaginal bleeding occurring at <28 weeks of pregnancy)	12	24
Preterm labor	10	20
Antepartum bleeding	1	2
Abdominal pain needing admission	1	2
Postpartum haemorrhage	2	4
Blood transfusion	1	2

Table 2: Pregnancy outcome

Pregnancy outcome	Number	Percentage
Spontaneous	2	4

Premature delivery	15	30
Vaginal delivery	3	6
Caesarean section	47	94

Table 3: Neonatal outcome

Neonatal outcome	Number	Percentage
Congenital anomaly	2	4
Fetal weight (Kg)	2912.3	
NICU admission	1 patient	

DISCUSSION

Leiomyomas, also called fibroids, are the most common benign gynecological tumor in premenopausal women. Leiomyomas are comprised of monoclonal cells arising from the myometrium. Continued research to determine the etiology of leiomyomas is ongoing. Several studies have identified specific gene mutations associated with fibroids. Some mutations have been linked to defects in cell transformation involving the RNA polymerase II transcriptional mediator subunit, MED12. Leiomyomas are diagnosed in close to 70% of white women and more than 80% of black women by age 50, but the incidence of clinical symptoms in blacks is double that found in whites. In addition to African descent, several factors are commonly associated with a higher risk of developing fibroids: early menarche, use of oral contraception before the age of 16 and an increase in body mass index. Conversely, the use of progestin-only contraceptives as well as multiparity decrease this risk.⁷⁻¹⁰

At present, although there are a lot of research about the prevention and treatment of uterine fibroids, the etiopathogenesis of uterine fibroids is still unclear. There are conflicting data on the relationship between obstetric outcomes and uterine fibroids, and the mechanism by which fibroids influence obstetric outcomes is unclear. Some studies have shown a relationship between uterine fibroids and pregnancy complications, such as preterm birth, premature rupture of membranes (PROM), fetal malpresentation, placental abruption and intrauterine fetal demise. In addition, uterine fibroids have been linked to labor dystocia, puerperal infection, operative vaginal delivery, cesarean delivery and postpartum hemorrhage (PPH). In contrast, other studies have reported no increased risks for these adverse obstetric outcomes with uterine fibroids. More recent studies have attempted to clarify these conflicting results by grouping fibroids by size and location, but those studies still obtained conflicting results due to their small sample sizes.⁴⁻⁸ Hence; the present study was conducted for assessing the pregnancy outcome among pregnant subjects with uterine fibroids.

A total of 50 subjects were enrolled. Mean age of the subjects was 33.9 years. 70 percent of the subjects were of Multigravida while 30 percent of the subjects were of primigravida. Mean duration of menstrual cycle per day was 28.6 while mean duration of menstrual period per day was 6.31. Threatened miscarriage was seen in 24 percent of the subjects while preterm labor was seen in 20 percent of the subjects. Antepartum bleeding and abdominal pain needing admission was seen in 2 percent of the patients each. Egbe TO et al determined the prevalence, clinical presentation and maternal and foetal outcomes of birth among pregnant women with leiomyoma in two secondary care hospitals in Limbe and Buea, Cameroon. The prevalence of fibroid in pregnancy was 16.7%. Respondents with leiomyoma were older than those without ($p < 0.001$) and of low parity ($p = 0.02$). Acute abdominal pain, vaginal bleeding were clinical presentation of leiomyoma in pregnancy. Cesarean birth, low Apgar score, and postpartum hemorrhage were adverse outcomes recorded.¹²

In the present study, postpartum haemorrhage was seen in 4 percent of the patients while one patient required blood transfusion. Spontaneous pregnancy was seen in 4 percent of the

patients, while premature delivery was seen in 30 percent of the patients. Vaginal delivery and C section were seen in 6 percent and 94 percent of the patients. Congenital anomaly was seen in 4 percent of the patients while NICU admission was seen in 1 patient. Deever et al analyzed a total of 84 pregnant women with a diagnosis of uterine myoma larger than 30 millimeter (mm) in diameter. In 64 patients, myomas were detected at the anterior uterine wall, while 20 were detected at the posterior uterine wall. All patients were followed monthly until the end of pregnancy. Demographic and obstetric characteristics were compared between the two groups. No difference was observed between the two groups with regard to the rates of preterm delivery, bleeding in early pregnancy, infants with small for gestational age, and hospitalization period during pregnancy. Women with posterior located myomas had significantly higher miscarriage rates.¹³ Zhang Y et al investigated which clinical characteristics influence the live birth rate after myomectomy. In that study the location of the myoma influenced the live birth rate after myomectomy: Anterior and posterior myomas were associated with higher live birth rates than other locations ($P=.001$).¹⁴ Bonduki et al conducted a retrospective study on 15 spontaneous pregnancies occurred after uterine arterial embolization for symptomatic uterine fibroids. Of these, 12.5% were miscarriages ($n = 2$), and 87.5% were successful live births ($n = 14$). The gestation time for the pregnancies with successful live births ranged from 36 to 39.2 weeks. There were two cases of placenta accreta (12.5%, treated with hysterectomy in one case [6.3%]), one case of premature rupture of the membranes (PRM) (6.3%) All of the patients were delivered via Cesarean section. Pisco et al evaluated the obstetric outcome. In 39 pregnancies occurred after uterine fibroid embolization: four spontaneous abortions (10.3%), 22 cesarean deliveries (66.6%), two preterm deliveries at 36 weeks (6.1%) were reported.^{15, 16}

CONCLUSION

From the above results, authors concluded that pregnant subjects with fibroids were subjected to enhanced incidence of complications throughout antepartum, intrapartum, and postpartum period.

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