EFFECT OF UTERINE FIBROID ON MODE OF DELIVERY

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ABSTRACT

Introduction: Uterine fibroids are the commonest benign tumors occurring in the female reproductive tract. They occur in 30%–70% of women in their Reproductive age. The fibroids incidence rises as the age increases. Its prevalence in pregnancy is 0.1%–10.7%.In such pregnancies, obstetric complication occur in 10%–30% . Studies show that in such pregnancies delivery occur at an earlier gestational . Fetal malpresentation, placenta previa, intrauterine growth restriction, labor dystocia, placental abruption, cesarean delivery , retained placenta, and postpartum hemorrhage (PPH) are common obs compications occurring in pregnancies with fibroids.

Objective: The objective of our study is to determine the frequency of cesarean delivery in pregnancies with uterine fibroids.

Materials and Methods: It is a Descriptive type cross sectional study which was carried out in Obstetric and Gynae unit 1 of Lahore General Hospital, Lahore for Six months from 06-08-2015 to 06-02-2016. Sample size of 100 cases was calculated with 95% confidence level, 10% margin of error and taking expected percentage of cesarean section i.e. 40% of cesarean section in patients with uterine fibroid.

Results: In our study, 59%(n=59) were between 20-30 years while 41%(n=41) were between 31-40 years of age, mean+sd was calculated as 28.31+5.67 years. Gestational age(in weeks) of the patients was calculated . 64%(n=64) were between 34-36 weeks while 36%(n=36) were between 37-39 weeks, mean+sd was calculated as 36.83+1.75 weeks of gestation. Regarding Parity of the patients, 63%(n=63) were between 1-3 paras and 37%(n=37) were having parity between 4-5. Frequency of cesarean delivery in patients with uterine fibroids performed in 57%(n=57) cases while 43%(n=43) had normal vaginal delivery.

Conclusion: The frequency of cesarean delivery is higher among patients with uterine fibroids. So, it is recommended that every patient who present with uterine fibroids, should be sort out for the mode of delivery. However, it is also required that every setup should have their surveillance in order to know the frequency of the problem.

Keywords: Uterine fibroids, cesarean delivery, frequency

INTRODUCTION

The Fibroids are the benign tumors of the uterus arising from smooth muscle cell.[1] They are the most common reproductive age benign tumors of women .[2] Their incidence increase as the age increases, with 40% to 60% at age 35 and rising to 70% to 80% by the age of 50. But still the etiology of uterine fibroids is unknown.[1]

The association of pregnancy with fibroids is about 0.5% to 4%[2] . it is increasing due to the couples delaying pregnancy to the age of 30.[3] 15% - 30% of myomas will get enlarged due to increase in the estrogen/ progestin level during pregnancy. But most of these get shrunk during puerperial period.[4] Intramura l and subserosal fibroids if they are less than 3cm of size they are not clinically significant.[4]

Pregnancies occurring with uterine fibroids are considered high risk pregnancies.[4] Mos t of these remain asymptomatic but it may adversely affect the course of the pregnancy and labour ,depending on the size location and location [4] .

In such pregnancies, obstetric complication occur in 10%–30% ..[1] Women with fibroids have increased caesarean section rate due to distortion of birth canal or other obstetric reasons.[4]

These pregnancies have high rate of caesarean delivery, increased chances of postpartum hemorrhage and prolonged stay at hospital so such cases need particular follow up.[4,,7]

The occurrence of adverse outcome of pregnancy is independent on the the size, number, and type of fibroids in this current study.

This agreed with the study of Poovathi and Ramalingam [8]

Ciavattini et al. noted a raised preterm delivery , cesarean delivery, and abnormal presentation rates in cases with multiple fibroids as compared to those with single or no fibroids[9]. The PPH rate was directly related with the increased size of uterine fibroid, and was also influenced by the location of fibroids . The Mode of delivery of a patient was also influenced by size and the number of the uterine fibroids present . Such prior information may be useful in assigning risk category to a pregnant women with fibroids.(10)

My study is designed to see the frequency of caesarean delivery in patients with uterine fibroids.

The discrepancy in the available literature makes the rationale of my study stronger .As patients are very much concerned these days to know about their mode of delivery, my study will be a useful addition to the valuable literature already available for patients . Their counseling would be done in a better way regarding their mode of delivery.

MATERIAL AND METHODS

It is a Descriptive type cross sectional study which was carried out in Obstetric and Gynae unit 1 of Lahore General Hospital, Lahore for Six months from 06-08-2015 to 06-02-2016. Sample size of 100 cases was calculated with 95% confidence level, 10% margin of error and taking expected percentage of cesarean section i.e. 40% of cesarean section in patients with uterine fibroid. Non probability purposive sampling technique was used. Patients selected had Single or multiple uterine Fibroids > 3 cm , were para one to five and of Age between 20-40 years . All patients selected were of Gestational Age 34 wks – 39 wks

Patients with medical disorders (pregnancy induced hypertension & Gestational diabetes),scarred uterus,Malpresentation ,Placenta previa ,Cervical fibroids obstructing birth canal, Lower segment fibroid more or equal to 10 cm were excluded from the study

A total of 100 cases fulfilling the inclusion/exclusion criteria presenting in Obstetrics and gynae unit 1 of Lahore General Hospital, Lahore were taken. Informed consent was taken for including data in the study. All patients were given trial of labour and followed till the time of delivery. Labour was monitored by partogram and fetal monitoring done .

The collected data was analyzed by using SPSS version 11.

RESULTS

A total of 100 cases fulfilling the inclusion/exclusion criteria were enrolled to determine the frequency of cesarean delivery in patients with uteirne fibroids.

Age distribution of the patients was done which shows that 59%(n=59) were between 20-30 years while 41%(n=41) were between 31-40 years of age, mean+sd was calculated as 28.31+5.67 years. (Table No. 1)

Gestational age(in weeks) of the patients was calculated in Table No. 2, where 64%(n=64) were between 34-36 weeks while 36%(n=36) were between 37-39 weeks, mean+sd was calculated as 36.83+1.75 weeks of gestation. (Table No. 2)

In table No. 3, parity of the patients was calculated and presented, 63%(n=63) were between 1-3 paras and 37%(n=37) were having paras between 4-5. (Table No. 3)

Frequency of cesarean delivery in patients with uterine fibroids reveals in 57%(n=57) cases while 43%(n=43) had no findings of uterine fibroids. (Table No. 4)

Table 1: Age Distribution (n=100)

Age(in years)	**No. of patients**	**%**
20-30	59	59
31-40	41	41
Total	**100**	**100**
Mean+SD	**28.31+5.67**	

Table 2: Gestational Age (n=100)

Gestational Age (in weeks)	**No. of patients**	**%**
34-36	64	64
37-39	36	36
Total	**100**	**100**
Mean+SD	**36.83+1.75**	

Table 3: Parity Distribution of The Patients (n=100)

Parity	**No. of patients**	**%**
1-3	63	63
4-5	37	37
Total	**100**	**100**

Table 4: Frequency of Cesarean Delivery in Patients with Uterine Fibroids (n=100)

Cesarean delivery	**No. of patients**	**%**
Yes	57	57
No	43	43
Total	**100**	**100**

DISCUSSION

Uterine fibroids are the commonest benign tumors occurring in the female reproductive tract.

They occur in 30%–70% of women in their Reproductive age[11]. The fibroids incidence rises as the age increases and are most frequent among the African American women. [12]. Its prevalence in pregnancy is 0.1%–10.7%[13,14].In such pregnancies, obstetric complication occur in 10%–30% [15,16]. Previous research work on obstetrical outcomes in women with uterine fibroids have discrepancies and inconsistent results. Studies show that in such pregnancies delivery occur at an earlier gestational.[16] Fibroids have also been reported to be associated with fetal malpresentation, intrauterine growth retardation, placenta previa, APH, labour dystocia , cesarean delivery, retained placenta, and postpartum hemorrhage (PPH).

One research supports the strong relationship between the uterine fibroids and an increased risk of cesarean delivery, specially when there is a large fibroid [17].

We planned to see the frequency of caesarean delivery in patients with uterine fibroids because there are differences in the data shown by studies in Pakistan and international studies. This discrepancy between the local and international study makes the reason of the study stronger.It is a common issue as the incidence of fibroid is rising now a days and patients are very much aware and concerned to know that what are the chances of their normal or ceasarean delivery.

In our study, 59%(n=59) were between 20-30 years while 41%(n=41) were between 31-40 years of age, mean+sd was calculated as 28.31+5.67 years. Mean+sd was calculated as 36.83+1.75 weeks of gestation, 63%(n=63) were between 1-3 paras and 37%(n=37) were having paras between 4-5. Frequency of cesarean delivery in patients with uterine fibroids reveals in 57%(n=57) cases while 43%(n=43) had normal vaginal delivery.

The fibroids usually occur with multiparity or infertility. The relative risk of fibroids decreases with each additional term pregnancy, the risk is reduced to one fifth with five term pregnancies compared with nulliparous women.[18]

Majority of our patients presented at a younger age between 20–30 years (59%). This is similar to the findings in black women in whom there is nine-fold increase incidence of fibroids. Women with uterine fibroids have had fewer term pregnancies and are generally of lower parity than the women without this problem.[19]

The findings of the current study are in agreement with a study showing that the caesarean section rate was 63.5%.[4] In another study caesarean section rate was 70%[20] .

Our findings are in contrast with one study revealed that the caesarean section rate in fibroid group was 40% vs 13.8% in the non fibroid group.[2]

Another study by Youssef A[21] , have recorded the cesarean delivery in 47.8% of the pregnant patients with fibroids which is near to our findings. They concluded that maternal morbidity due to this association is important. It is essential that pregnant women be aware of the importance of prenatal consultation during the pregnancy.

Though several reports have suggested that uterine fibroids are associated with an increased rate of cesarean section,[22,23,24] but Valerie I et al did not find a difference in mode of delivery in women with large fibroids compared to those with small or no fibroids[25]. This is in agreement with findings published by Stout et al in which women with fibroids less than 5 cm did not have an increased risk of cesarean section when compared with women with fibroids greater than 5 cm (adjusted odds ratio of 1.1, 95% confidence interval ¼ 0.9–1.4).[26]

The limitation of our study was that we did not extended our study with regards to the size of the fibroids.

However, in the above studies we recorded that the frequency of cesarean delivery in other countries is comparatively decreased as compare to our study and other studies conducted in Pakistan. The reason behind this difference may be due to the presentation of cases in last weeks of gestation for antenatal care and low health facilities in the country. Though frequency of cesarean delivery in our study is lower than Noor S[5] (57% v/s 70%). This may be due to the fact that now health facilities are comparatively better than 8 years ago in our country.

The findings of our study are useful addition to the convincing literature already available and patients may be counselled in a better way regarding their mode of delivery.

CONCLUSION

The frequency of cesarean delivery is still higher among patients with uterine fibroids. So, it is recommended that every patient who present with uterine fibroids, should be sort out for the mode of delivery. And every setup should have their surveillance in order to know the frequency of the problem.

REFERENCES

1. Lee H, Rnorwitz E, Shaw J. Contemporary Management of fibroids in pregnancy. Rev Obstetric Gynecol 2010;3(1):20-7.

2. Tchente Nquefack C, Foqaing AD, Tejiokem MC, Nana Njotanq P, MbUR, Leke R. Pregnancy outcome in a group of Cameroonian women with uterine fibroids. J Gynecol Obstet Biol Reprod (Palis) 2009;38(6):493-9.
3. MorqanOrtiz F, Pina Romers B, Elorriaga Garcia E, Baez Barraza J, Quevedo Castro E, Peraza Garay FdeJ. Uterine leiomyomas during pregnancy and its impact on Obstetric Outcome. Ginecol Obstet Mex 2011;79(8):467 –73.
4. Javed M, Tariq R, Rashid M, Hassan S, Kanwal S. Effect of uterine fibroid on pregnancy outcome [Online]. [Cited Oct 2012] Available from: pjmhsonline.com/effect-of-uterine-fibroid-on-pre.htm-66k
5. Sunkara SK, khairyM, EL-ToukhyT, Khalaf Y, Coomarasamy A. The effect of intramural fibroids without uterine cavity involvement on the outcome of IVF treatment: a systemic review and meter-analysis. Hum Reprod 2010;25(2):418-29.
6. Klatsky PC, Tran ND, CaugheyAB, FujimotoVY. Fibroids and reproductive outcomes: a systemic literature review from conception to delivery. AmJ obstet Gynecol 2008;198(4):357-66.
7. S.-J. Lam, S. Best, and S. Kumar, "The impact of fibroid characteristics on pregnancy outcome,"American Journal of Obstetrics & Gynecology, vol. 211, no. 4, pp. 395–395.e5, 2014.
8. M. Poovathi and R. Ramalingam, "Maternal and Fetal Outcome in Pregnancy with Fibroids: A Prosp ective Study," International Journal of Scientific Study, vol. 3, no. 11, 2016.
9. A. Ciavattini, N. Clemente, G. Delli Carpini, J. Di Giuseppe, S. R. Giannubilo, and A. L. Tranquilli, "Number and size of uterine fibroids and obstetric outcomes," The Journal of Maternal-Fetal and Neonatal Medicine, vol. 28, no. 4, pp. 484–488, 2015.
10. 10. Zhao R, Wang X, Zou L, Li G, Chen Y, Li C, et al. (2017) Adverse obstetric outcomes in pregnant women with uterine fibroids in China: A multicenter survey involving 112,403 deliveries. PLoS ONE 12(11): e0187821. https://doi.org/10.1371/journal.pone.0187821
11. Okolo S. Incidence, aetiology and epidemiology of uterine fibroids. Best Pract Res Clin Obstet Gynaecol 2008;22:571–88.
12. Marshall LM, Spiegelman D, Barbieri RL, Goldman MB, Manson JE, Colditz GA, et al. Variation in the incidence of uterine leiomyoma among premenopausal women by age and race. Obstet Gynecol 1997;90:967–73.
13. Hasan F, Arumugam K, Sivanesaratnam V. Uterine leiomyomata in pregnancy. Int J Gynaecol Obstet 1990;34:45–8.
14. Laughlin SK, Baird DD, Savitz DA, Herring AH, Hartmann KE. Prevalence of uterine leiomyomas in the first trimester of pregnancy: an ultrasound-screening study. Obstet Gynecol 2009;113:630–5.
15. Katz VL, Dotters DJ, Droegemeuller W. Complications of uterine leiomyomas in pregnancy. Obstet Gynecol 1989;73:593–6.
16. Coronado GD, Marshall LM, Schwartz SM. Complications in pregnancy, labor, and delivery with uterine leiomyomas: a population-based study. Obstet Gynecol 2000;95:764–9.
17. Michels KA, Velez Edwards DR, Baird DD, Savitz DA, Hartmann KE: Uterine leiomyomata and cesarean birth risk: a prospective cohort with standardized imaging. Annals of Epidemiology 2014, 24(2):122–126. pmid:24321612
18. Vollenhoven BJ, Lawrence AS, Healy DL. Uterine fibroids: A Clinical Review. Br J Obstet Gynaecol 1990;97:285–98.
19. West GP. Uterine fibroids. In: Robert W, Shaw W, Patrick Soutter, Stuart L. Stanton. Gynaecology. Second ed. United States: Churchill Livingstone (NJ/IL);2003.p. 441–56.
20. Noor S, Fawad A, Sultana R, Bashir R, Jalil H, Suleman N. Pregnancy with fibroids and its obstetric complications. J Ayub Med Coll Abbottabad 2009;21 (4):37-40.
21. Youssef A, Ben Aissia N, Gara MF. Association fibromyoma and pregnancy. About 23 cases. Tunis Med. 2005;83(4):194-7.
22. Rice JP, Kay HH, Mahony BS. The clinical significance of uterine leiomyomas in pregnancy. Am J Obstet Gynecol 1989;160:1212–6.
23. Sheiner E, Bashiri A, Levy A, Hershkovitz R, KatzM, Mazor M. Obstetric characteristics and perinatal outcome of pregnancies with uterine leiomyomas. J Reprod Med 2004;49:182–6.
24. Qidwai GI, Caughey AB, Jacoby AF. Obstetric outcomes in women with sonographically identified uterine leiomyomata. Obstet Gynecol 2006;107:376–82.
25. Shavell Valerie I, Thakur M. Adverse obstetric outcomes associated with sonographically identified large uterine fibroids. Fertil & Steril 2012;97:107-26.Stout MJ, Odibo AO, Graseck AS, Macones GA, Crane JP, Cahill AG. Leiomyomas at routine second-trimester ultrasound examination and adverse obstetric outcomes. Obstet Gynecol 2010;116:1056–63.