

## Coexisting fibroid in pregnancy and its labour outcome in Nigeria

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### Abstract

The management of coexisting uterine fibroid in pregnancy is controversial. There is the need to know the labour outcome of women with coexisting fibroid in pregnancy in our environment.

**Objective:** To ascertain the labour outcome of coexisting fibroid in pregnancy and the prevalence.

**Materials and Method:** The study is a retrospective one that reviewed 48 women with coexisting fibroid in pregnancy over a 30 month period.

**Result:** Out of 612 women that had antenatal care and delivery in our area of study, 48 of them had coexisting fibroid in pregnancy giving a prevalence of 7.8%.

The mean age of the parturients was  $32.38 \pm 5.22$  years and most of the parturients were primiparous (56.3%). Up to 89.5% of them delivered at term and 89.6% of their babies had normal birth weight with good APGAR score in 79.2% of them. Their caesarean delivery rate was 79.2% and 2 successful caesarean myomectomies were done.

**Conclusion:** Fibroid can coexist with pregnancy with good outcome but they are prone to high caesarean delivery rate and at risk of uterine rupture. A low prevalence was recorded in our study and caesarean myomectomy is feasible in selected cases.

**Keywords:** Coexisting; Pregnancy; Fibroid; Labour; Nigeria

### 1. Introduction

Uterine fibroid in spite of being known to impair fertility could complicate pregnancy. It is a common benign neoplasm of the female genital tract, especially the uterus and it is prevalent in Africa [1,2,3,4].

Pregnancy can coexist with uterine fibroid and a prevalence of 0.75 to 16.7% has been reported from previous studies [5,6,7,8]. Pregnancy related hormones influence the size of uterine fibroids and fibroids have many impact on pregnancy. Though women with uterine fibroid in pregnancy generally have concerns related to adverse outcomes, they however have uneventful outcomes in pregnancy [8].

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Pregnancy coexisting with uterine fibroid has been reported to end in both good and poor or adverse outcome [9,10]. Some of the untoward events in women with coexisting uterine fibroid in pregnancy include miscarriages, preterm deliveries, placenta praevia, abruptio placentae, premature rupture of membranes, malpresentation like breech and transverse lie [9]. Others are increased caesarean delivery, prolonged or obstructed labour, uterine rupture, ante partum, intra partum and post partum haemorrhage as well as uterine inversion and puerperal sepsis [9,11]. The babies are prone to early fetal loss, prematurity, fetal distress, newborn special care unit admission, perinatal morbidity and mortality [11,12,13,14].

Fibroids developed in the uterine body are more likely to cause miscarriage than the ones developed in the lower uterine area. Enhanced uterine irritability and contractility are suggested factors that lead to increased pregnancy loss when there is a coexisting fibroid [15,16].

Though some parturients had carried their coexisting fibroid pregnancies to term and delivered healthy babies vaginally, they were prone to severe abdominal and pelvic pain and intermittent hospital admissions with its attending financial cost [11,17].

The management of fibroid during pregnancy has remained controversial [18]. We have however managed some women with coexisting fibroid in pregnancy in our centre and therefore carried out this study to ascertain their fetomaternal outcome.

### *Objective*

The study assessed the fetomaternal outcome in parturients who had coexisting fibroid in pregnancy and their prevalence.

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## **2. Material and methods**

This is a retrospective study of parturients who had coexisting fibroid in pregnancy and delivery at Savealife Hospital, Port Harcourt, Nigeria between January 2017 and June 2019. Of the 612 women that had antenatal care and delivery, 48 of them with fibroid in pregnancy were selected for the study. The diagnosis of fibroid in pregnancy was done at booking in first trimester.

Their case files and the labour ward register were retrieved from the medical records department and labour ward respectively for the data. The information obtained were age, parity, educational status, gestational age at delivery, mode of delivery, ante partum, intra partum and post partum complications. Others include birth weight, APGAR scores and perinatal complications.

The data obtained was analysed with IBM's Statistical Package for Social Science (SPSS) version 23.0 for windows and presented with descriptive tables, pie chart and chi square. Relative risk was calculated at 95% confidence interval while P value less than 0.05 was statistically significant.

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## **3. Results**

Out of 612 women that had antenatal care and delivery over the 30 months period of this study, 48 of them had coexisting uterine fibroid in pregnancy giving a prevalence of 7.8% for coexisting fibroid in pregnancy.

Table 1 showed the demography of the women with 72.9% of the participants being 35 years and below. The mean age was  $32.38 \pm 5.22$  years with their ages ranging from 24 to 48 years. Most of the parturients were primiparous at 56.3% while those with parity of 4 constituted the least group with 4.2%. Most of the women studied had tertiary level of education and made up 66.7% of the study population.

**Table 1** Demographic characteristics of the participants

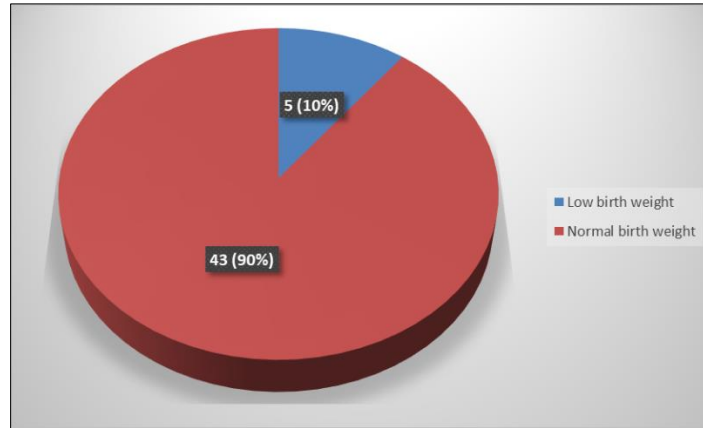
	Frequency	Percentage
<b>Age group</b>		
21 - 25	5	10.4
26 - 30	14	29.2
31 - 35	16	33.3
>35	13	27.1
<b>Parity</b>		
1	27	56.3
2	11	22.9
3	8	16.7
4	2	4.2
<b>Level of Education</b>		
Primary	0	0.0
Secondary	16	33.3
Tertiary	32	66.7

The mean age is  $32.38 \pm 5.22$ , while the range is 24.00 - 48.00 years

**Table 2** Distribution of gestational age at delivery and mode of delivery

	Frequency	Percent
<b>Gestational Age</b>		
32.00	1	2.1
35.00	2	4.2
36.00	2	4.2
37.00	5	10.4
38.00	11	22.9
39.00	8	16.7
40.00	15	31.3
41.00	4	8.3
<b>Mode of delivery</b>		
SVD	10	20.8
C/S	38	79.2

As shown in table 2 above, most of the participants (89.5%) had term delivery at 37 weeks and above while 10.5% of them had preterm delivery. Thirty eight of the participants had caesarean section (C/S) which was 79.2% while 20.8% of them had spontaneous vaginal delivery (SVD).

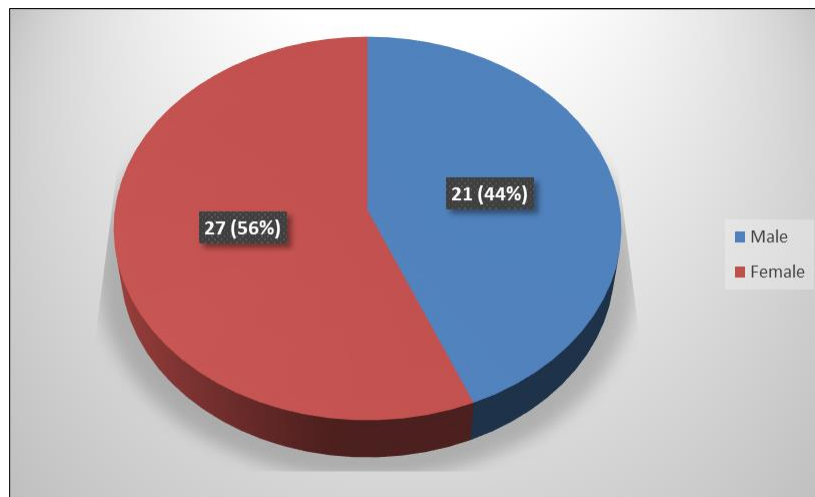


**Figure 1** Birth weight of the babies

The mean birth weight is  $3.19 \pm 0.59$  kg while the range is 1.60 – 4.50kg.

Figure 1 above captures the representation of the birth weight of the babies of the participants in a pie chart. It shows that 89.6% of the babies weighed 2.5kg and above while 10.4% of them were of low birth weight.

Figure 2 below depicts the sex of the babies. They were more female babies than their male counterparts. The females constituted 56.25% while the males were 43.75% of the babies.



**Figure 2** Sex of the baby

The APGAR scores of the babies are shown in table 3 below. A greater part of the babies had good APGAR score of 7 and above and constituted 79.2%.

**Table 3** APGAR score

	Frequency	Percent
<7	10	20.8
≥7	38	79.2

The mean APGAR score is  $7.29 \pm 2.25$ . The mean duration of newborn admission is  $4.88 \pm 1.91$ , the range is 2 to 14 days and the mean duration of hospital admission for the women is  $9.90 \pm 1.79$ , the range is 2 to 30 days.

#### 4. Discussion

Coexisting fibroid in pregnancy has led to both good and poor obstetric outcome in women of reproductive age [8,10]. Forty eight out of 612 women who had antenatal care and delivered within the 30 month period of study had coexisting fibroid in pregnancy. This gave the prevalence of 7.8%. This is comparable to 10.7% prevalence from a previous study and higher than 0.75% and 2.65% from related studies [5,9,17]. A range of 1.6 to 16.7% has been reported in earlier studies on coexisting fibroid in pregnancy [7,19].

The mean age of the participants in our study was  $32.38 \pm 5.22$  years with women in the range of 31-35 years making up the highest group. This is similar to the age range of 30-34 years with highest group of fibroid in pregnancy in the study by O'Sullivan et al [20].

Most of the patients we studied were primiparous (56.3%). This correlates with a previous study in which most of the pregnant women with coexisting fibroid were primiparous [20]. The multiparous women (para 4) constituted the lowest proportion of the women in this study. It is known that multiparity plays a protective role against fibroid development by remodeling the uterine tissues [20].

The labour outcome of the women with coexisting fibroid in pregnancy in our study was favourable as most of them had term delivery at 37 weeks and above (89.5%). The babies had normal birth weight (89.6%) while 10.4% had low birth weight. The babies from our study had good APGAR scores of 7 and above in 79.2% of them. Only a few of them had APGAR score of less than 7. This might have contributed to the few neonatal morbidities like jaundice in 4 of them and hypoglycaemia in one baby with their mean duration of newborn special care unit admission being  $4.88 \pm 1.91$  days. They were eventually discharged in good condition. We however had a case of intrauterine fetal death at 36 weeks in a woman with abruptio placentae. Women with uterine fibroid in pregnancy generally have uneventful outcomes even though they have concerns related to adverse outcomes [8,18].

On the mode of delivery; many of the patients had caesarean delivery (79.2%). This is as seen in another study where the presence of uterine fibroid in pregnancy was significantly associated with caesarean delivery [9]. Some precautions were taken during caesarean section to minimize blood loss. This included suppository rectal misoprostol administration and intravenous oxytocin infusion. It was consistent with what was done in another study [5]. Though the management of fibroid in pregnancy is controversial, we had successful vaginal deliveries in 20.8% of the women studied [18]. We administered 800mcg suppository misoprostol as precautionary measure to prevent postpartum haemorrhage.

Coexisting fibroid in pregnancy has been associated with adverse event like preterm deliveries due to enhanced uterine irritability and contractility [11,15,16]. Preterm deliveries (10.5%) were recorded in the women we studied. This was similar in other studies on coexisting fibroid in pregnancy [11,12,13,14]. Though uterine fibroids do not appear to increase the incidence of preterm premature rupture of membranes, other studies show the opposite [21,22]. There was no premature rupture of membranes in our study. We recorded a case of intra partum posterior uterine wall rupture in a para 4 woman for which we repaired the site of rupture, did bilateral tubal ligation and transfused 4 units of blood. The patient had a live female baby and good post operative recovery. Adverse outcome in coexisting fibroid in pregnancy has been recorded in previous studies [11,15,16].

Myomectomy decision is considered difficult during caesarean section as a result of bleeding due to increased vascularity of the pregnant uterus [20]. We had 2 caesarean myomectomies during delivery in our study. The first was in a woman with fibroid praevia at the anterior intramural location while the second case was in a woman with 3 anterior subserosal fibroid masses. They were all successfully removed without blood transfusion and their postoperative recovery was uneventful. Misoprostol suppositories were administered rectally during the procedure as prophylaxis to prevent bleeding. Related studies have reported successful caesarean myomectomies both during antenatal and delivery periods [18,23,24,25,26].

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#### 5. Conclusion

There was a low prevalence of coexisting fibroid in pregnancy and fibroid can coexist with pregnancy with favourable outcome. They are however, prone to high caesarean section rate and at risk of uterine rupture. Caesarean myomectomy is feasible in selected cases.

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## Compliance with ethical standards

### *Acknowledgments*

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### *Disclosure of conflict of interest*

The authors declare no conflict of interest.

### *Statement of ethical approval*

This was obtained from the hospital's ethics committee.

### *Statement of informed consent*

Informed consent was obtained from all the participants included in this study.

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## References

- [1] Saleh HS, Mowafy HE, Hameid AE, Sherif HE, Mahfouz EM. Does Uterine Fibroid Adversely Affect Obstetric Outcome of Pregnancy? *Biomed Res Int* 2018 Mar 26; 2018: 8367068.doi: 10.1155/2018/8367068.PMCID.PMC6087613.
- [2] Metwally M, Raybould G, Cheong YC, Home AW. Surgical treatment of fibroids for subfertility. *Cochrane Database Syst Rev* 2020 Jan 29; 1 (1):CD03857. doi: 10.1002/14651858.cd003857.pub4.
- [3] Ezeama CO, Ikechebelu JI, Obiechina NJ, Ezeama NN. Clinical Presentation of Uterine Fibroids in Nnewi, Nigeria: A 5-year Review. *Annals of Medical and Health Sciences Research* 2012; 2 (2): 114-118 doi: 10.4103/2141-9248.105656.
- [4] Jombo SE, Ani VC, Ozigbo CE. Lower Limb Monoparesis Secondary to Impacted Pedunculated Fibroid. A Case Report. *International Journal Obstetrics and Gynaecology Research* 2018; 5(2): 626-631.
- [5] DayBaird D, Dunson DB, Hill MC, Cavius D, Sheetman JM. High Cumulative Incidence of Uterine Leiomyoma in Black and White Women: Ultrasound Evidence. *Am J. ObstetGynecol* 2003; 188: 100-107.
- [6] Shavell VI, Thakur M, Sawant A, Konger MI, Jones TB, Singh M, Puscheck EE, Diamond MP. Adverse Obstetric Outcomes Associated with Sonographically Identified Large Uterine Fibroids. *Fertil Steril* 2012; 97: 107-110.
- [7] Egbe TO, Bodjang TG, Tchounzou R, Egbe EN, Ngowe MN. Uterine Fibroids in Pregnancy: Prevalence, Clinical Presentation, Associated Factors and Outcomes at the Limbe and Buea Regional Hospitals, Cameroon: A Cross Sectional Study. *BMC Res. Notes* 2018; 11: 889.
- [8] Timovanu MC, Lozneau L, Timovanu SD, Timovanu VG, Onofriesen M, Ungureanu C, Toma BF and Cojocaru E. Uterine Fibroids and Pregnancy: A Review of the Challenges from a Romanian Tertiary Level Institution. *Healthcare* 2022. 10.855. <https://doi.org/0.390/healthcare10050855>.
- [9] Zhao R, Wang X, Zou L, Li G, Chen Y, Li C, Zhang W. Adverse Obstetric outcomes in pregnant women with uterine fibroids in China. A multicentre survey involving 112,403 deliveries. *PLoS One* 2017 Nov 14;12(11) e: 0187821,doi:10.1371/journal.zone.0187821.PMID
- [10] Guiliani E, As-Sanie S, Mersh EE. Epidemiology and Management of Uterine Fibroids. *Int. J. Gynecol. Obstet* 2020; 149: 3-9.
- [11] Leo HJ, Norwitz ER, Shaw J. Contemporary Management of Fibroids in Pregnancy. *Rev. Obstet. Gynecol* 2010; 3: 20-27.
- [12] Morgan Ortiz F, Pina Romero B, Ellorriaga Garcia E, Baez Barraza J, Quevedo Castro E, de PerazaGaray F.J. Uterine leiomyomas during pregnancy and its impact on obstetric outcome. *Ginecol. Obstet. Mex* 2011; 79: 467-473.

- [13] Vitale SG, Tropea A, Rossetti D, Carnelli M, Cianci A. Management of Uterine Leiomyomas in Pregnancy: Review of Literature. *Update Surg* 2013; 65:179-182.
- [14] Yousea K, Erraghay S, Guennoun A, Manouni N, Bouchikhi C, Bunami A. MyomaPraevia and Pregnancy. *Pan.Afr. Med. J* 2019; 33: 216.
- [15] Klatsky PC, Trau ND, Caughey AB, Fujimoto VY. Fibroids and Reproductive Outcomes: A Systematic Literature Review from Conception to Delivery. *Am J. Obstet. Gynecol* 2008; 198: 357-366.
- [16] Abam DS, Kaso T. Uterine Fibroids and Pregnancy: A Review of the Challenges. In *Obstetrics*; Abduljabbar HS, Ed; In Tiech: London , UK, 2017; ISBN 9789535137030.
- [17] Vitagliano A, Noventa M, Di Splezio Sardo A, Saccardi C et al. Uterine fibroid size modifications during pregnancy and puerperium: evidence from the first systematic review of the literature. *Archives of Gynaecology and Obstetrics* 2018; 297 (10). doi : 10.1007//500404-017-017-4621-4.
- [18] An J, Lin J, Sun L. Myomectomy for a Large Submucosal Fibroid at the Time of Caesarean section. *J Coll Physicians Surg Pak* 2022 Mar; 32 (3): 383-385. doi: 10.29271/jcpsp: 2022.03.383.
- [19] Dai Y, Xia L, Lin J, Xu R, You W. Study on the method of Enucleation of Anterior Uterine Fibroids by Transverse Incision of the Lower Uterine Segment during Caesarean Section. *BMC Pregnancy Childbirth* 2021; 22: 744.
- [20] O’Sullivan M, Overton C. Tailor Management to the Patient With Fibroids. *Practitioner* 2017; 201: 19-22.
- [21] Chuang J, Tsai HW, Hwang JI. Fetal Compression Syndrome Caused by Myoma in Pregnancy: A Case Report. *Acta Obstet Gynecol. Scand.* 2001; 80: 472-473.
- [22] Sundermann AC, Aldridge TD, Hartmann KE, Jones SH, Torshenson EH, Edwards DRV. Uterine Fibroids and Risk of Preterm Birth by Clinical Sub types : A Prospective Cohort Study. *BMC Pregnancy Childbirth* 2021; 21: 560.
- [23] Saccardi C, Visentin S, Noventa M, Cosni E, Litla P and Gizzo S. Uncertainties about laparoscopic myomectomy during pregnancy: A lack of evidence or an inherited misconception? A critical literature review starting from a peculiar case. *Minimally Invasive Therapy & Allied Technologies* 2015; 24 (4): 139-194.
- [24] Okoji NA, Eli S, Abam DS, Nnaka MP. Inevitable caesarean myomectomy: Report of 2 cases. *Gazette Med* 2015; 4: 378-381.
- [25] Kotani Y, Tobiume T, Fujishima R, Shigeta M, Takaya H, Nakai H, Suzuki A, Tsuji I, Mandai M, Maksumara N. Recurrence of Uterine Myoma after Myomectomy: Open Myomectomy vs LM. *J Obstet Gynaecol. Res.* 2018; 44: 298-302.
- [26] Awoleke JO. Myomectomy during Caesarean Birth in Fibroid-Endemic, Low-Resource Setting. *Obstet Gynecol Int* vol. 2013, Article ID 520834, 6 pages, 2013. [https://doi.org/ 10.1155/2013/52834](https://doi.org/10.1155/2013/52834).