

# Obstetric Outcome in Primigravidae in a Tertiary Hospital: A Five-Year Review

Burodo A. T<sup>1</sup>, Garba J. A<sup>2\*</sup>

<sup>1</sup>MBBS, FWACS, Department of Obstetrics & Gynaecology, Usmanu Danfodiyo University / Usmanu Danfodiyo University Teaching Hospital, Sokoto, Nigeria

<sup>2</sup>MSc, FWACS, FMCOG, Department of Obstetrics & Gynaecology, Usmanu Danfodiyo University Teaching Hospital Sokoto, Usmanu Danfodiyo University, Garba Nadama Rd, Sokoto, Nigeria

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\*Corresponding author: Garba J. A

MSc, FWACS, FMCOG, Department of Obstetrics & Gynaecology, Usmanu Danfodiyo University Teaching Hospital Sokoto, Usmanu Danfodiyo University, Garba Nadama Rd, Sokoto, Nigeria

## Abstract

Primigravidae are at increased risk of complications during pregnancy and labour. These risks of complication associated with Primigravidae if not properly anticipated and managed promptly can result in increased morbidity and mortality for both the mother and the baby. The aim of the study was to determine the pregnancy outcome among Primigravida at Usmanu Danfodiyo University Teaching Hospital. The specific objectives were to determine the complications encountered among the primigravida and to determine the association between some complications and pregnancy outcome. This was a retrospective study from 1<sup>st</sup> Jan.2017 - 31<sup>st</sup> dec.2021. The case records of all primigravidae who delivered at UDUTH within the study period were reviewed. There were 130 cases of primigravida managed during the 5-year study period. Among which 99 case notes were retrieved giving a retrieval rate of 76%. The majority of cases were between the ages of 20-30 years and 31-40 years (30.3% and 37.4% respectively). Most of the cases were Hausa/Fulani (74.7%). Majority were Muslims and 45.5% had secondary education. Majority of the cases (73.1%) had caesarean section and 22.2% had vaginal delivery. The most encountered pregnancy complication among them was preeclampsia/eclampsia in 29.6% of the cases. This is followed by post-dated pregnancy (9.4%) then breech presentation at term (13.3%). Majority of the participants that had preeclampsia and post-dated pregnancy ended up with caesarean section. There was significant association between the complication of preeclampsia and post-dated pregnancy with the mode of delivery ( $p < 0.001$ ).

**Keywords:** Primigravida, Pregnancy outcome, Complications.

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## INTRODUCTION

A Primigravida is a woman carrying her first pregnancy; this Primigravida is starting a new life which is crucial in her obstetrics career since subsequent obstetrics performance will depend on how well the first pregnancy was managed. (Sarafadeen *et al*, 2016, Danish *et al*, 2016) First pregnancy is often viewed with anxiety not only by the patient who is going through the experience for the first time but also by her relatives and to some extent even the caregiver. In view of this anxiety, antenatal care is very useful to all pregnant women especially the Primigravidae in order to receive information from health care professionals regarded pregnancy, labour and

parenthood. (Ojiyi *et al*, 2012, Jimoh 2003) During this antenatal care, pregnant women especially Primigravidae are provided with information on physiological and psychological change during pregnancy, fetal development, labour and care of the baby. The obstetric performance of Primigravida is associated with many complications, therefore they are considered high-risk because of both maternal and fetal concern (Sarafadeen *et al*, 2016, Danish *et al*, 2016, Ojiyi *et al*, 2012, Jimoh 2003) Reported complications include hypertensive disorders of pregnancy, preterm delivery, low birth weight, abnormal- labour pattern, risk of operative deliveries and increased perinatal death. (Danish *et al*, 2016, Jimoh 2003, Fawole 2006) These risks are further compounded among

Premigravidae in our environment due to poverty, illiteracy, poor utilization of antenatal care, lack of optimal labour monitoring facilities, lack of enough hospital infrastructures and staffing. This study will therefore determine the obstetric outcome of Primigravida in our centre and suggest ways of anticipating and preventing the associated complications.

## METHODOLOGY

This was a retrospective study of cases of primigravida managed at Usmanu Danfodiyo University Teaching Hospital (UDUTH) over 5 years (2017 to 2021). The list of cases was obtained from the record office and the case notes were retrieved. Relevant information was obtained and entered into statistical package for social sciences (SPSS) version

23. The data analysis was done using the same software. Chi square test was used to determine the association between complications and pregnancy outcome. The results were obtained in number and frequencies and displayed in Tables and charts.

## RESULTS

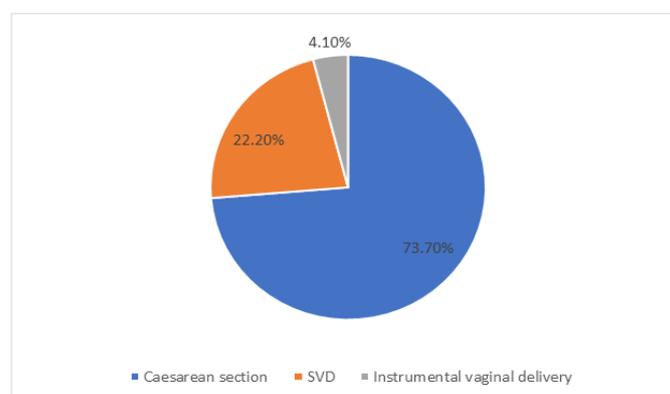
There were 130 cases of primigravida managed during the 5-year study period. Among which 99 case notes were retrieved giving a retrieval rate of 76%. The majority of cases were between the ages of 20-30 years and 31-40 years (30.3% and 37.4% respectively). Most of the cases were Hausa (74.7%) and were not gainfully employed (75.8%). Majority were Muslims and 45.5% had secondary education. The socio-demographic characteristic is shown in Table 1.

**Table 1: Sociodemographic characteristics of the cases**

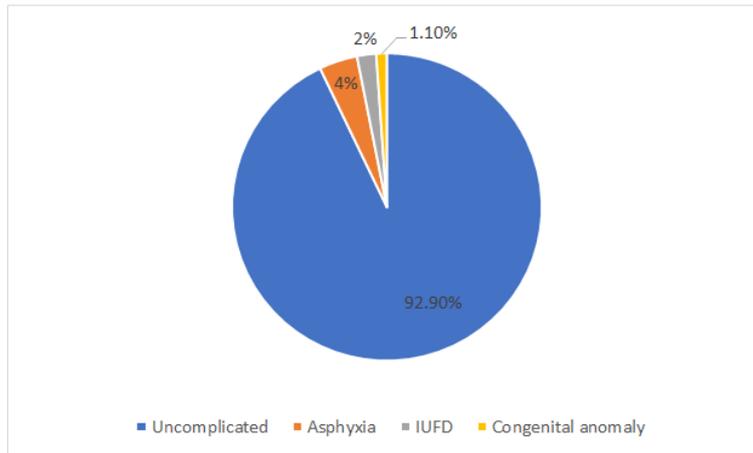
Characteristics	Number (n)	Percentage (%)
<b>Age(years)</b>		
Less than 20 years	25	25.3
20 to 30 years	30	30.3
31 to 40 years	37	37.4
> 40 years	7	6.0
<b>Ethnicity</b>		
Hausa/Fulani	74	74.7
Yoruba	14	14.1
Igbo	7	7.1
Others	4	4.1
<b>Occupation</b>		
Not gainfully employed	75	75.8
Civil servant	12	12.1
	12	12.1
<b>Educational status</b>		
No formal education	13	13.1
Primary	26	26.3
Secondary	45	45.5
Tertiary	15	15.1
<b>Religion</b>		
Islam	84	84.8
Christianity	15	15.2

Majority of the cases (73.1%) had caesarean section and 22.2% had vaginal delivery. This is shown in figure 1. The neonatal outcome was good as 92.9%

had no neonatal complication, 4% had asphyxiated babies and 2% had intrauterine fetal death. This is shown in Figure 2.



**Figure 1: Mode of delivery among the cases**



**Figure 2: Neonatal outcome among the cases**

Most of the cases had one complication or the other and the most encountered pregnancy complication among them was preeclampsia/eclampsia in 29.6% of

the cases. This is followed by post-dated pregnancy (9.4%) then breech presentation at term (13.3%). This is shown in Table 2.

**Table 2: Complications encountered among the cases**

Complication	Number	Percentage
No complication	10	10.2
Preeclampsia/eclampsia	29	29.6
Post-dated pregnancy	19	19.4
Breech at term	13	13.3
Abruptio placentae	6	6.1
Post-partum haemorrhage	5	5.1
Background infertility	5	5.1
Coexisting uterine fibroids	5	5.1
Others	6	6.1

Majority of the participants that had preeclampsia and post-dated pregnancy ended up with caesarean section (96.2% & 93.8% respectively). There

was significant association between the complication of preeclampsia and post-dated pregnancy with the mode of delivery ( $p < 0.001$ ). This is shown in Table 3.

**Table 3: Association between pregnancy complications and mode of delivery**

Complication	Mode of delivery		Chi square	P value
	SVD n (%)	CS n (%)		
No complication	9 (75)	1 (3.8)	20.796	< 0.001
Preeclampsia	3 (25)	25 (96.2)		
No complication	9 (69.2)	1 (6.3)	12.59	< 0.001
Post-dated pregnancy	4 (30.8)	15 (93.8)		

There was no significant association between the complications encountered in pregnancy and neonatal outcome. Most of the cases that had

preeclampsia and post-dated pregnancy did not have any neonatal complication. This is shown in Table 4.

**Table 3: Association between pregnancy complications and neonatal outcome**

Complication	Neonatal outcome		Chi square	P value
	Stable n (%)	Asphyxia n (%)		
No complication	10 (27)	0 (0)	0.7	0.695
Preeclampsia	27 (73)	1 (100)		
No complication	10 (35.7)	0 (0)	0.545	0.46
Post-dated pregnancy	18 (64.3)	1 (100)		

## DISCUSSION

Majority of the studied patients were in age group 20-40 years which shows that the trend of early marriage in our environment is reduced. The obstetrics complications are usually less in this age group. Most (74.7%) of the cases were Hausa/Fulani and majority (84.8%) were Muslim. This is not surprising because the people in the environment are predominately Hausa/Fulani and Muslim. Most of the cases had one complication or the other and the most encountered pregnancy complications among them were pre-eclampsia/ eclampsia in 29.6% of the cases followed by post-dated pregnancy (9.4%). The occurrence of hypertensive disorder in pregnancy in form of pre-eclampsia and eclampsia in this study is consistent with that from other previous studies. (Danish *et al.*, 2016, Ojiyi *et al.*, 2012, Ziahdah *et al.*, 2001, Ogedengbe *et al.*, 2006, Timothy 2007) Primigravidity is a risk factor for hypertensive disorders in pregnancy.

Similarly complications of post-dated pregnancy observed in the study were has consistently been confirmed by other previous studies. (Denish *et al.*, 2012, Jimoh 2003, Ogedengbe *et al.*, 2006, Chigbu *et al.*, 2009) Majority of cases (73.1%) had caesarean section against the 22.2% case that had vaginal delivery. Most of the participant that had Pre-eclampsia and post-dated pregnancy ended up with caesarean section and there was statistically significant association between the complications of pre-eclampsia and post-dated pregnancy with the mode of delivery.

The neonatal outcome from this study was good as 92.9% had no neonatal complications. However, 4% of the cases had asphyxiated babies and 2% of them had intrauterine fetal death. There was no significant association between the complications encountered in pregnancy and neonatal outcome. This is explained by the fact that most of the cases that had Pre-eclampsia and post-dated pregnancy did not have any neonatal complications. This indicates that Primigravidity does not have significant adverse neonatal outcome.

## CONCLUSION

This study showed that Primigravidity is a high-risk pregnancy with several associated obstetrics complications. The most common complications were preeclampsia and post-dated pregnancy. There was also significant association between the complications of pre-eclampsia and post-dated pregnancy with the mode of delivery.

## RECOMMENDATIONS

Primigravidae should be managed by specialist in a well-equipped hospital in order to get a satisfactory pregnancy, labour and perinatal outcome. Studies on predictors of preeclampsia and post-dated pregnancy should be conducted in order to avert these complications among primigravidae.

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