

**INCIDENCE OF BREECH PRESENTATION AND ITS ASSOCIATION WITH FETAL/  
MYOMETRIAL LESIONS IN KANO**

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eMail: [ayyubarabiu@yahoo.com](mailto:ayyubarabiu@yahoo.com) Phone: 08055559473**ABSTRACT**

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**Background:** The entrance of the fetal buttocks or lower extremities into the maternal pelvic inlet is defined as breech presentation. It complicates 3-4% of all pregnancies. The occurrence of breech presentation decreases with advancing gestational age. Both myometrial and fetal lesions have been linked with persistence of breech presentation **Methodology:** It was a prospective study conducted at Aminu Kano Teaching Hospital. Ethical approval was obtained from the hospital ethics committee. Information on socio-demographic characteristics was sought and obtained on a questionnaire after obtaining informed consent. Obstetric sonograms were obtained using 3.5 MHz linear transducer connected to Mindray Digital Ultrasound Imaging System (Model DC6; Shenzhen Mindray Biomed Electronics, Shenzhen, China). Obstetric correlates that were determined and recorded on the questionnaire were the lie, presentation, estimated gestational age, myometrial and fetal lesions. The data were analyzed using SPSS Electronic Software Version 19 (SPSS Inc, IL, Chicago, USA). Chi-squared test was used for categorical data and P-Value of <0.05 was considered statistically significant. **Results:** A total of 300 pregnant women were recruited for the study. The mean age  $\pm$  SD was 27.3 $\pm$ 5.20. The incidence of breech presentation was highest below the gestational age of 28 weeks (14.3%); the least (1.6%) was above the gestational age of 36 weeks. There was no statistically significant association between breech presentation and myometrial or fetal lesion (P=0.213; P=0.787 respectively). **Conclusion:** There was low incidence of breech presentation at term (1.6%). The incidence of breech presentation has an inverse relation with an increasing gestational age. Myometrial and fetal lesions were not statistically associated with occurrence of breech presentation.

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**Keywords:** Breech presentation, Incidence, Myometrial/Fetal Lesions, Kano.**INTRODUCTION**

Breech presentation is defined as the polar alignment of the fetus in which the fetal buttocks or feet occupy the maternal pelvic inlet.<sup>1</sup> It's the most frequent malpresentation occurring in pregnancy.<sup>2</sup> The incidence of breech presentation has an inverse relationship with gestational age. It's as high as 35% before 28 weeks of gestation, 25% at 28 to 32 weeks, decreasing to about 8% at 32 to 34 weeks of gestation.<sup>3</sup> The incidence of breech presentation is about 3 to 4% at term.<sup>4-7</sup>

The aetiology of breech presentation is not clear; however, several factors are associated with high

failure of spontaneous version to cephalic presentation.<sup>8</sup> These factors that are associated with high failure rate of spontaneous version to cephalic presentation include prematurity, intra uterine growth restriction, multiple gestation and fetal abnormality.<sup>9-11</sup>

Both myometrial and fetal lesions such as uterine malformation, fibroids, polyhydramnios, placenta previa and anencephaly have also been linked with persistence of breech presentation due to failure of spontaneous version to cephalic presentation.<sup>12</sup> Such association between myometrial or fetal lesion

and breech is not well elucidated in the literature; to our knowledge, no such review has been carried out in our region.

This study was aimed at reviewing the incidence of breech presentation based on the gestational age and its association with myometrial or fetal lesion.

### MATERIALS AND METHOD

It was a prospective study conducted between 1<sup>st</sup> August, 2016 to 31<sup>st</sup> June 2017 among pregnant women attending antenatal care at Aminu Kano Teaching Hospital. Ethical approval was obtained from the hospital ethics committee. A questionnaire was designed and structured before administration. Information on socio-demographic characteristics was sought and obtained after obtaining informed consent. Non consenting pregnant women, women with multiple gestation, pregnant women below the age of 18 years were excluded from the study (difficulty in obtaining assent). All consenting consecutive pregnant women were sent to the radiology department of the hospital for ultrasound assessment of the pregnancy.

Obstetric sonograms done by the principal investigator were obtained using 3.5 MHz linear transducer connected to Mindray Digital Ultrasound Imaging System (Model DC6; Shenzhen Mindray Biomed Electronics, Shenzhen, China). Obstetric correlates that were determined and recorded on the questionnaire were the lie, presentation, estimated gestational age, myometrial and fetal lesions.

The data were analyzed using SPSS Electronic

Software Version 19 (SPSS Inc, IL, Chicago, USA). A Chi-squared test was used for categorical data. The P value of <0.05 was considered statistically significant. Findings were presented numerically and in tabular form.

In this study; myometrial lesion was defined as any abnormal growth or malformations in the uterus that affect its shape such as uterine malformations or fibroids. Fetal lesion was defined as any form of fetal malformation such as anencephaly or hydrocephaly that would predispose the fetus to persistence of breech or failure of spontaneous version to cephalic presentation.

### RESULTS

During the study period (from 1<sup>st</sup> August, 2016 to 31<sup>st</sup> June 2017 1<sup>st</sup> January), a total of 300 pregnant women were recruited for the study. The mean age $\pm$ SD was 27.3 $\pm$ 5.20.

Majority of the fetal presentations 178 (59.3%) were cephalic. Breech presentation 64 (21.3%) was the second most frequent fetal presentation. Table 1.

The incidence of breech presentation was highest below the gestational age of 28 weeks (14.3%); the least (1.6%) was above the gestational age of 36 weeks. Table 2

There was no statistically significant association between breech presentation and myometrial (Fibroids) or fetal lesion (anencephaly) (P=0.213; P=0.787 respectively). Table 3

Only one (0.3%) pregnant woman presented with myometrial lesion (Fibroids). Similarly, there was only one case (0.3%) of fetal lesion (anencephaly).

**Table 1:** Fetal Presentations in the Study Population

Presentation	Frequency	Percent (%)
Cephalic	178	59.3
Breech	64	21.3
Transverse	9	3.0
Oblique	4	1.3
Compound	11	3.7
Unstable	34	11.3
<b>Total</b>	<b>300.0</b>	<b>100.0</b>

**Table 2:** Rate of Breech Presentation based on the Gestational Age

Gestational age (weeks)	Frequency	Percent (%)
<28	43	14.3
28-32	9	3
33-36	7	2.3
>36	5	1.6

**Table 3:** Cross Tabulation between Presentations and Myometrial or Fetal Lesion

Presentation	Lesion		Total	P-value
	(Myometrial)			
	Absence	Presence		
Breech	63	1	64	0.213
Non Breech	236	0	236	
Total	299	1	300	
	(Fetal)			
Breech	64	0	64	0.787
Others	235	1	236	
Total	299	1	300	

## DISCUSSION

In this study, the incidence of breech presentation at term was 1.6%. This is lower than the figure of 3-4% reported by other workers.<sup>[4-7]</sup> However, Abasiatti et al<sup>13</sup> reported an incidence of 1.4% of breech presentation at term. Smaller sample size of 300 pregnant women could be attributed to that.

In this study, breech presentation was the most prevalent among all other forms of malpresentations (21.3%). This has been reported by other workers.<sup>14,15</sup>

We found no statistically significant association between myometrial or fetal lesions and occurrence of breech presentation ( $P>0.05$ ). Smaller sample size of 300 pregnant women might be responsible for the lack of statistically significant association.

## CONCLUSION

There was low incidence of breech presentation at term (1.6%). The incidence of breech presentation has an inverse relation with increasing gestational age. Myometrial and fetal lesions were not statistically associated with occurrence of breech presentation.

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