Obstetric characteristics of women attending antenatal clinic in a tertiary hospital in Nigeria

Ago Boniface Uji1*, Efiok Eyo Efiok1, Abeshi Sylvester Etenikang1, Njoku Charles Obinna1, Nkwo Emeka Chinedum2, Oyama Sunday Egor1

1Department of Obstetrics and Gynaecology, University of Calabar Teaching Hospital Calabar, Nigeria.
2Department of Obstetrics and Gynaecology, Federal Medical Center Umuahia, Abia, Nigeria.

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Antenatal care is intended not only to provide safe pregnancy and delivery, but also to provide health awareness on the benefits of antenatal care services. Overtime, early booking and reduction of grand multiparity have been advocated. This study intended to find out the obstetric characteristics of our booked patients by assessing the percentage of women who booked early, the mean gestational age at booking, the parity configuration, and mean maternal age at booking in our center. This was a retrospective review of the booking register of pregnant women at the booking clinic. Ethical consent was obtained and relevant information extracted from the booking register and imputed in Epi_Info7 statistical package for analysis. 1649 pregnant women were booked during the study period. 15.3% booked early, the mean gestational age was 21.7 ± 5.1 weeks, 27.8% were nulliparous while 2.5% were grand multiparous. The mean age of the women at booking was 27.9 ±7.1years. About 85% of our pregnant women booked late. There is need to intensify health awareness on the benefits of early booking.

Key words: Antenatal care, gestational age at booking, parity and maternal age at booking.

INTRODUCTION

Antenatal care services have been seen as a veritable tool in the reduction of maternal morbidity and mortality as well as perinatal morbidity and mortality. Early booking defined as booking in the first trimester of pregnancy has been associated with many benefits such as: early confirmation of pregnancy, its location and number of fetuses; proper estimation of expected date of delivery to prevent inadvertent prematurity or postmaturity; evaluation for risk factors and maternal medical conditions that may adversely affect the index pregnancy; early baseline clinical and laboratory investigations upon which further follow up may be based.

According to the WHO, antenatal care improves the survival and health of babies and provides an entry point for the woman to competent health care providers who promote healthy pregnancy, safe childbirth, early and exclusive breastfeeding and care of babies. (Ornella Lincetto n.d.)

The WHO prefers that the first antenatal visit should be made in the first trimester. Some researchers have quoted percentage of women who booked early in their centers. This study may be an appraisal of our antenatal health talks on the value of early booking as well as reduction in the percentage of grand multiparity.

OBJECTIVES

This study was intended to find out the percentage of women who booked early in our center. It also intended to measure the mean gestational age at booking, the parity, and mean age of the pregnant women at booking, as well as the percentage of women who were grand multiparous.
Table 1. Obstetric characteristics of the booked patients.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency</th>
<th>Total</th>
<th>% of total</th>
<th>Mean ± SD</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gestational Age</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(weeks)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;14 w</td>
<td>242</td>
<td>1585</td>
<td>15.3</td>
<td>21.7 ± 5.1</td>
<td>6 – 40 weeks</td>
</tr>
<tr>
<td>≥14 w</td>
<td>1343</td>
<td></td>
<td>84.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Maternal Age</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;20</td>
<td>58</td>
<td>1649</td>
<td>3.5</td>
<td></td>
<td>Age range</td>
</tr>
<tr>
<td>20 – 34</td>
<td>1459</td>
<td></td>
<td>87.3</td>
<td></td>
<td>27.9 ± 7.1</td>
</tr>
<tr>
<td>≥35</td>
<td>152</td>
<td></td>
<td>9.2</td>
<td></td>
<td>15 – 46 years</td>
</tr>
<tr>
<td><strong>Parity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>383</td>
<td>1376</td>
<td>27.8</td>
<td></td>
<td>0 - 10</td>
</tr>
<tr>
<td>1</td>
<td>453</td>
<td></td>
<td>32.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 - 4</td>
<td>506</td>
<td></td>
<td>36.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>≥5</td>
<td>34</td>
<td></td>
<td>2.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Gravidity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>275</td>
<td>1648</td>
<td>16.7</td>
<td></td>
<td>1 - 12</td>
</tr>
<tr>
<td>2 – 4</td>
<td>1024</td>
<td></td>
<td>62.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>≥5</td>
<td>349</td>
<td></td>
<td>21.2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Gestational age

Figure 1. Pictorial representation of the proportion of early and late booking.

SUBJECTS AND METHOD

This was a retrospective descriptive analysis of the booking data from the booking register of pregnant women who booked at the antenatal clinic of the University of Calabar Teaching Hospital, Calabar between January 2014 and March 2014. This hospital situated in Calabar (the capital city of Cross River State) is the only tertiary hospital in the state. The Obstetrics and Gynaecology department runs obstetric emergencies as well as specialized care. Women are given health talks every day in the clinic especially about adverse pregnancy conditions and how to recognize them and present early for care. The booking register contained information on: name, hospital number, date of booking, LMP, EDD, age, number of past and present pregnancies and their outcomes.

Consent for the use of the hospital records for this study was obtained, and information on age, parity, gestational age, was extracted and computed into
RESULTS

There were 1649 antenatal bookings between January 2014 and March 2014. Gestational age at booking was calculated from either the last menstrual period or an early ultrasound scan where available. This was only possible in 1585 (96.1%) of the women. The women were then reclassified into those gestational ages <14 weeks and those ≥14 weeks, and presented in Table 1 and Figure 1. Table 1 also shows the maternal age, parity and gravidity at booking.

The data on age was complete 1649 (100%) for all the attendees. The mean age at booking was 27.9 ±7.1 years. The age distribution of the women is pictorially represented in pie chart in Figure 2. Most (87%) of the booked women were in the age range of 20 to 34 years.

The data on parity was only indicated in 1376 (83.4%) of the women whereas 1648 (99.9%) of the women indicated the number of pregnancies they have carried.
Although 16.7% of the women who booked were primigravidas, they represented 71.8 percent of the nulliparous women who came for antenatal booking. There were 242 (15.3%) of 1585 women who booked early in this study. This proportion is better represented in Figure 1. The number of women who were grand multiparous was 34 (2.5%) of 1376 whose parities were indicated.

**DISCUSSION**

The World Health Organization recommended that pregnant women should preferably commence antenatal care within the first trimester of pregnancy (Ornella Lincetto n.d.) but there have been different interpretations for early booking. In the USA and UK, early booking is defined as booking within the first 12 weeks of pregnancy (early access to antenatal care n.d.). In Nigeria, booking occurring within the first 14 weeks have been used by some researchers (Ebeigbe 2010/Ebeigbe PN 2005). Some reports have used 16 weeks as their defining point (Dennis Isaac Ihenne 2012).

The proportion of women who booked early may differ among studies. In this study, we used the gestations less than 14 weeks as early while those from 14 weeks and beyond were late. Our study showed that about 15% of the women booked early while 85% booked late. This finding is slightly higher than the 14% reported by Okunlola et al in Ibadan in 2008 (Okunlola, 2008). In this study women had booked from gestational ages of 6 weeks to 40 weeks with a mean gestational age of 21.7 ± 5.1 weeks. This study however, did not determine the sociodemographic determinants of booking. What determines when they book may not be different from studies in other centers. From personal interactions during antenatal booking clinic, most attendees believed that the best time to book was at 5 months of pregnancy. This mean GA of 21.7 weeks is close to the 21.4 ± 5.4 weeks earlier reported in Sagamu by Lamina (Lamina, 2004) and 21.09 ± 6.98 recently reported in Ado-Ekiti (Aduloju, 2016). It is lower than the 23.7 weeks reported in Benin (Gharoro, 2000) and 24.3 ± 5.5 weeks reported in neighbouring Abakaliki (Onoh, 2012).

The mean maternal age at booking was 27.9 ± 7.1 years with a range from 15 – 46 years. This is almost the same as the 27.5 ± 5.8 years at Abakaliki. The oldest attendee was aged 46 years who got pregnant 13 years after her first child by natural conception. 87% of our women became mothers between the ages of 20 and 35. Figure 2 shows this clearly. This shows that our women understand that the best age to become a mother is between 20 and 35. On Friday 31 December 2010, Dr Tony Falconer (who was then the President of the Royal College of Obstetricians and Gynaecologist RCOG) in an interview with Dennis Campbell (health correspondent of the Guardian) had said “there is no doubt that between 20 and 35 is the time to have your children”. The guardian.com

Most of the attendees were para 1 – 4 (70%). The grand multiparous women constituted 2.5% of antenatal attendees whose parities were indicated. The challenge here was that only 1376 (83.4%) of the 1649 attendees had their parities documented. The parities ranged from 0 – 10. However, looking at gravidity in Table 1, it can be seen that 1024 (62.1%) of 1648 attendees were carrying their 2nd to 4th pregnancies. Only 349 (21.2%) of the attendees were in their 5th or more pregnancies. Perhaps in agreement with Treacy A (Treacy A rcm.org.uk), multiparity is more likely in the unbooked women. This had been shown in a study of risk factors and perinatal outcome of uterine rupture in a low resource setting where all the patients were multiparous and 63.8% of them were unbooked (Anthony, 2013).

**Conclusion**

About 15% of our women booked in the first trimester of pregnancy. This means that 85% of our women booked late. There is need to intensify health education and create awareness on the benefits of early booking.

**Conflict of interest**

None

**REFERENCES**


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