

Caesarean Section Deliveries at Chukwuemeka Odumegwu Ojukwu University Teaching Hospital-Amaku, Awka Anambra State Nigeria: A 5 year review

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Abstract: Background: In recent times caesarean section has become a pertinent procedure in the drive to reduce maternal and perinatal mortality and morbidity. However, international health organizations are perturbed by the skyrocketing rates of Caesarian section (C/S).

Objective: To determine the rate, indications, complications and outcomes of caesarean section deliveries in Chukwuemeka Odumegwu Ojukwu University Teaching Hospital-Amaku, Awka (COOUTH-Amaku).

Materials and Methods: This is a descriptive retrospective study of deliveries in COOUTH-Amaku from January, 2018 to December, 2022. Data was retrieved from delivery register, patient folders and theatre records. A pretested proforma was used to collect data on socio-demographic characteristics, Obstetric characteristics of the subjects, indications for Caesarean section, maternal and perinatal outcomes and complications. Data was analyzed using SPSS 23 and results were presented accordingly.

Results: The total number of deliveries recorded within the study period was 1,511 with 307 of such deliveries being Caesarean sections (CS), this gives a CS rate of 20.2%. The results also showed that of all the women who had cesarean section, 84.7% were unbooked while 15.3% were booked. The unbooked cases accounted for 75.6% of emergency C/S within the study period. The commonest indication for CS was cephalopelvic disproportion (23.1%) followed by previous scar (21.4%). The perinatal mortality rate was 75 per 1000. There was no maternal mortality. A few complications followed the surgeries with post partum hemorrhage being the commonest.

Conclusion: The rate of caesarean section in COOUTH is moderately high as against the upper limit of 15% set by WHO. Again, the commonest indications for CS are CPD and previous scars. This underscores the need to offer primary caesarean section only when it is absolutely necessary.

Keywords: Caesarean section, high rate and review.

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1. INTRODUCTION

The natural route of childbirth is through the vagina. However some women are unable to achieve that due to several reasons. The Obstetrician in that case has no option other than resorting to caesarean section for the good of the mother and fetus.

The rate at which this procedure has been rising has been a global concern over the past 35years [1]. This rise varies from country to country and even within the same country due to various reasons [2]. This rise has been attributed to improvement in surgical techniques, innovations, technology, changes in women’s preference and increase in the number of women with previous scar in the uterus [3]. The fear of litigation in recent time has been reported in some publications [4]. Despite the increasing acceptance of caesarean delivery as an alternative mode of delivery, the overall outcome for the mother and the baby and the cost of the procedure are better with vaginal delivery [5].

The need to checkmate this rate of increase in the procedure becomes paramount in order not to negate the comparative advantage of vaginal delivery over caesarean section.

2. METHODS

This is a descriptive retrospective study of deliveries in COOUTH-Amaku from January, 2018 to December, 2022. Data was retrieved from delivery register, patient folders and theatre records and socio-demographic characteristics such as maternal age, level of education, residential address, religion, marital status husband’s occupation was collected as well as obstetric characteristics of the subjects (parity, booking status, type of caesarian section, postnatal visit etc), indications for Caesarean section, maternal and perinatal outcomes and complications. The total number of delivery studied within the period under review was also collected. This study was analyzed using SPSS 23 and results were presented in simple percentages, frequency, mean and standard deviation. COOUTH-Amaku is a state owned teaching hospital located in Awka-Anambra State, Nigeria. The Obstetrics and Gynecology department is manned by Consultants, Registrars and Medical Officers.

3. RESULTS

During the period under review, there were 307 caesarean births out of 1511 deliveries giving an overall caesarian section rate of 20.2%. Of these 307 patients, the distribution of parity was primipara (30.3) primigravida (27.4%), multiparous (38.8) grandmultiparous women (2.9%). The mean age of the parturient was 30.5 ± 5.0 years and the highest number of women who had the procedure was within the age range of 30 – 34years. 62.5% of women who delivered through CS lived in urban areas, 30.6% lived in rural areas while 6.8% did not reveal their place of residence. The level of education was 62.2% for tertiary institution, while secondary and primary education was 19.9% and 0.7% respectively. The study further revealed that 68.7% of women were unbooked cases while 31.3% were booked cases for caesarean section and the unbooked cases constituted the greater number of emergency C/S. The emergency caesarean section carried out was 75.6% while elective caesarean section was 24.4%. The percentage of neonatal death recorded within the period under review was 75 per 1000. The number of life babies was 294 while still birth was 23. There was no account of maternal mortality within the study period.

Finally, the highest indication for C/S in the facility within the reviewed period was Cephalopelvic disproportion (CPD) 23.0% and Previous CS scar (21.4%). However other common indications for C/S were abnormal lie and presentation (9.0%), Preeclampsia (8.60%) and Fetal distress (7.1%). The least common indications were Poor maternal cooperation (0.20%), Gestational Diabetes (0.20%), Fetal tachycardia (0.20%), Failed VBAC (0.20%) and Cord prolapsed (0.20%)

Sociodemographic Characteristics of Parturient

Table 1: Age distribution of parturients

Age of patients	Frequency	Percentage
15 -19	6	1.9
20 - 24	32	10.4
25 - 29	97	31.6

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30 - 34	106	34.5
35 - 39	57	18.6
=/> 40	8	2.6
Mean age (SD)	• (5.0)	

Table 2: Level of education

Highest education	Frequency	Percentage
Tertiary	191	62.2
Secondary	61	19.9
Primary	55	0.7

Table 3: Place of residence

Place of residence	Frequency	Percentage
Rural	94	30.6
Urban	192	62.5
Unknown	21	6.8

Table 4: Parity

Number of children	Frequency	Percentage
1	171	53.8%
2 – 4	124	43.0%
= or > 5	8	2.5%

Table 5: Booking status

Booking status	Frequency	Percentage
Booked	96	31.3
Unbooked	211	68.7

Table 6: Type of Caesarean section

Type of C/S	Frequency	Percentage
ELCS	75	24.4
EMCS	232	75.6

Table 7: Fetal Outcome

Delivery Outcome	Frequency	Percentage
Alive Baby	294	92.5
Still birth	23	7.5

Maternal outcome

Within the period under review, nil maternal death was recorded alive women were 306.

Table 8: Indications of Caesarean section

(some women recorded more than one indication)		
	N	%
CPD	97	23.00%
Previous CS scar	90	21.40%
Abnormal lie and presentation	38	9.00%
Preeclampsia	36	8.60%
Fetal distress	30	7.10%

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Fetal macrosomia	20	4.80%
PROM	19	4.50%
Antepartum haemorrhage	18	4.30%
Failed induction of labour	15	3.60%
Postdatism	14	3.30%
Twin gestation	13	3.10%
Oligohydramnios	6	1.40%
IUFD	6	1.40%
Short interpregnancy interval	4	1.00%
fetal bradycardia	4	1.00%
Polyhydramnios	2	0.50%
IUGR	2	0.50%
Bad obstetric history	2	0.50%
Poor maternal cooperation	1	0.20%
Gestational Diabetes	1	0.20%
Fetal tachycardia	1	0.20%
Failed VBAC	1	0.20%
Cord prolapsed	1	0.20%

The highest indication for CS in the facility within the reviewed period was Cephalopelvic disproportion (CPD) 23.0% and Previous CS scar (21.4%). Clinically diagnosed cases of ruptured uterus were excluded from the study.

4. DISCUSSION

This study showed a caesarean section rate of 20.2% which is consistent with most of other reports across other tertiary institutions in the country. For instance, University of Abuja Teaching Hospital 21.4% [4], Ahmadu Bello University Teaching Hospital, Zaria 24.5% [6]. Very much higher rates were gotten from Federal Medical Centre, Yenogoa 42.4% [7], Lagos University Teaching Hospital 40.1% [8] and Babcock University Teaching Hospital 51.2% [9]. These reports are institutional based studies but cross sectional studies still showed unmet needs for caesarean section in Nigeria. Two reports from analysis of Nigeria Demographic and Health Survey data reported recently showed caesarean section rates of 2.1% [10] and 2.7% [11]. From this study, the mean age of the mother is 30.2 ± 5.0 . This is consistent with the findings of some other institutions in Nigeria for example Ahmadu Bello University Teaching Hospital, Zaria 30.6years [4] and Nnamdi Azikiwe University Teaching Hospital, Nnewi 30.8years [12]. This may be related to the age of marriage which in recent time is often after graduation from high school. Most patients captured in this study were educated and lived in urban areas. These are people who are likely to accept caesarean section easily and can afford the cost.

68.7% of the women who had CS were unbooked and this group constituted a greater number of women whose delivery were through emergency caesarean section. This finding is consistent with the works done elsewhere in this subject [4], [7]. This underscores the importance of antenatal care in pregnancy as well as child care. The high rate of emergency cases seen in this study could be due to the fact that most decision to carry out caesarean sections like CPD, prolonged labour, failed vaginal birth after previous CS etc are normally interventions during labour. Again, the institution been a referral centre receives a lot of emergency cases which most often ends with caesarean section.

Both maternal and fetal outcome were good in this study, probably due to the high level of education and exposure of the mother since most of them reside in urban centers. In addition, the center being a teaching hospital has what it takes to offer both normal and emergency obstetric care. The commonest indication for C/S in the facility within the reviewed period was Cephalopelvic disproportion (CPD). This is similar with the findings in medical centre Yenogoa, Bayelsa state [7] and Lagos University Teaching Hospital [8] but contrary to the findings in Nnewi where previous scar was the commonest indication [12]

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5. CONCLUSION

Based on this study, the rate of caesarean section in COOUTH-Amaku is good but slightly higher than the suggested rate of 10-15% set by WHO. There is still a need for obstetricians to regain control of the ways we teach and train young doctors and midwives to ensure that management of labour is done well. More so, since the commonest indication for caesarean section in this study and most other studies are majorly cephalopelvic disproportion and previous scar, every effort should be geared towards offering primary caesarean section only when it is absolutely necessary. Vaginal birth after one previous C/S should be encouraged.

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