Indications for Caesarean Section at a Nigerian District Hospital

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ABSTRACT

Background: Caesarean section (CS) is a common surgical procedure performed in women of reproductive age. The numerous indications for a CS may be due to foetal or maternal problems. Though it is a life saving procedure, it also carries a higher morbidity and mortality than vagina delivery.

Method: This is a retrospective study conducted from January 2005 to December 2006 at a secondary health facility located in a rural setting in Nigeria. The maternity ward and theatre registers were the sources of data.

Results: There were fourteen indications for the 155-caeserean sections performed with obstructed labour being the highest indication. Obstructed labour, eclampsia and pre-eclampsia were the major indications for caeserean section. There were 4 (2.6%) Maternal deaths and 19(12.2%) stillbirths out of the 156 babies delivered.

Conclusion: Lack of utilization antenatal care services present in the locality and late presentation are some of the risks of maternal mortality and poor foetal outcome. The populace need to be educated on the importance of antenatal care.

Key Words: Caesarean Section; Indications; Nigerian Hospital

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INTRODUCTION

Caeserean section is one of the commonly performed surgical procedures in obstetrics and is certainly one of the oldest operations in surgery [1] and its incidence is rising worldwide [2] . The caesarean section is a time-honoured approach to shortening labour when either mother or child is in danger [3]. The incidence of CS varies from country to country and within the same country varies from hospital to hospital [4-6]. CS has saved lives of many women and babies around the world [7]. Most reports on outcome of caeserean section in this environment are from specialist and tertiary care centres where there is higher concentration of manpower, logistics, and therefore a higher standard of obstetric care. A suburban care centre obviously has larger constraints in the form of socio-demographic characteristics of patients it caters for, availability of manpower and facilities and level of care it provides [2]. It is on this background that this study aims to study the indications and outcome of caesarean section at a secondary health facility located in a rural setting, in Northern Nigeria.

MATERIALS AND METHOD

This is a 24 months retrospective study carried out at general hospital, Aliero, Kebbi State located in northern Nigeria from January 2005-December 2006. All doctors at the centre at the time the study was conducted were general practitioners with no postgraduate specialist training in obstetrics. The hospital does not have an active obstetric unit hence labour cases are admitted into the maternity ward while patients who had caesarean section were admitted into the female surgical ward, as there was no postnatal ward. Data was collected from the theatre and maternity ward register while other clinical records were retrieved from the records department. The data of all patients who had caeserean section from January 2005 to December 2006 was recorded for analysis. The patients were counselled and informed consent obtained once a decision to do a CS was made. The routine laboratory investigations done were haemoglobin estimation, blood grouping, genotype, random/fasting blood sugar, and urinalysis. The hospital offered antenatal care services for the period under review.

RESULTS

The total number of caeserean section of the 24 months study was 155. Four were elective caeserean sections while the rest were emergencies. There were fourteen indications for the caeserean sections in the study as shown in table I. The patients with previous vesico-vagina fistulae had a successful repaired vesico-vagina fistula in previous pregnancy at a tertiary centre and were advised at the centre were the repair was done to have elective caesarean section in subsequent pregnancies. Three patients were operated because of abruptio placenta resulting in live baby and two fresh stillbirths. The patients were operated because they were exhausted with severe anaemia from the concealed haemorrhage in the uterus and presented as emergencies. All the patients who had emergency caeserean section engaged the services of traditional birth attendants before coming to the hospital. The patients with retained second twin all delivered the first twin at home and were told by the traditional attendants that they had a retained placenta, the diagnosis of retained second twin was made following clinical evaluation of the patients on arrival at the hospital, with audible foetal heart sounds. Maternal deaths occurred only in patients with obstructed labour and eclampsia as the indications for surgery. One hundred and fifty-six babies were born by caesarean section during the study period of which 137(87.82%) were live births, 19(12.18%) stillbirths [15(9.62%) fresh stillbirths and 4(2.56%) macerated stillbirths]. Maternal outcome is

shown in table II and foetal outcome in table III. Patients who had spontaneous vagina delivery at the study centre are few, as most of the women prefer home delivery and only present to the hospital in labour usually with complications.

DISCUSSION

CS is undertaken to improve maternal or foetal outcome or reduce anticipated complications from labour and spontaneous vagina delivery. CS itself was associated with a significant morbidity, mortality however; improvements in surgical, anaesthetic techniques and availability of blood transfusion and antibiotics have made caeserean section safe [8]. Emergency CS is done during labour while elective caeserean section is planned and done on a specific date chosen by the patient and doctor after accessing the maturity of the foetus. In this study emergency CS accounted for 97.4% of CS. The rate of CS various Nigerian studies are 10.4% in Awka [8], 9.1% in Ilorin [9], 34.6% in a private hospital in Lagos [10], 18% in Jos [11], 23.1% in Sagamu [12], 11.8% in Maiduguri [13]. In Nigeria, majority of the secondary health facilities are located in the rural and semi-urban areas where majority of the population resides. Most of the secondary health centres are owned either by the state government or by religious organizations. Several reports on review of CS in the country emanate from the tertiary institutions [8].

Table I Showing Indications For Caesarean Section

S/N	INDICATION	N (%)
1	Obstructed labour	75(48.4%)
2	eclampsia	31(20.0%)
3	Pre-eclampsia	14(9.0%)
4	Prolonged labour	9(5.8%)
5	Placenta preavia	7(4.5%)
6	Hand presentation	5(3.2%)
7	Abruptio placenta	3(1.9%)
8	Retained second twin	3(1.9%)
9	Previous vesico-vagina fistulae	2(1.3%)
10	Post term	2(1.3%)
11	Transverse lie	1(0.7%)
12	Locked twins	1(0.7%)
13	Cord prolapse	1(0.7%)
14	Foot presentation(footling breech)	1(0.7%)
	Total	155(100%)

Table 2 Showing Maternal Outcome After Caesarean Section

S/N	INDICATION	MATERNAL OUTCOME	
		Alive	Mortality (death)
1	Obstructed labour	72(47.7%)	3(75%)
2	eclampsia	30(19.9%)	1(25%)
3	Pre-eclampsia	14(9.3%)	-
4	Prolonged labour	9(6.0%)	-
5	Placenta preavia	7(4.6%)	-
6	Hand presentation	5(3.3%)	-
7	Abruptio placenta	3(2.0%)	-
8	Retained second twin	3(2.0%)	-
9	Previous vesico-vagina fistula	2(1.3%)	-
10	Post term	2(1.3%)	-
11	Transverse lie	1(0.7%)	-
12	Locked twins	1(0.7%)	-
13	Cord prolapse	1(0.7%)	-
14	Foot presentation	1(0.7%)	-
	Total	151	4

Table 3 Showing Foetal Outcome After Caesarean Section

S/N	INDICATION	FOETAL OU TCOME		
		Alive	Fresh stillbirth	Macerated stillbirth
1	Obstructed labour	66(42.31%)	7(4.49%)	2(1.28%)
2	Eclampsia	30(19.23%)	1(0.64%)	-
3	Pre-eclampsia	11(7.05%)	3(1.92%)	-
4	Prolonged labour	8(5.13%)	1(0.64%)	-
5	Placenta preavia	6(3.85%)	-	1(0.64%)
6	Hand presentation	4(2.56%)	-	1(0.64%)
7	Abruptio placenta	1(0.64%)	2(1.28%)	-
8	Retained second twin	3(1.92%)	-	-
9	Previous vesico-vagina fistula	2(1.28%)	-	-
10	Post term	2(1.28%)	-	-
11	Transverse lie	1(0.64%)	-	-
12	Locked twins	1(0.64%)	1(0.64%)	-
13	Cord prolapse	1(0.64%)	-	-
14	Foot presentation	1(0.64%)	-	-
	Total	137(87.82%)	15(9.62%)	4(2.56%)
	Total number of babies born 156			

In many resource poor settings, access to skilled care and crucial interventions is limited. Caeserean delivery is a marker for the availability and use of obstetric services in these situations. The number of women having babies born by CS is growing rapidly in both developed and developing countries [14]. The commonest indication for caesarean section in this study was obstructed labour (42.3%) due to cephalo-pelvic disproportion. The specific treatment in obstructed labour is mainly operative aimed at relieving the obstruction. Obstructed labour has remained a common obstetric emergency in our obstetric practice [15] and is a common cause of maternal morbidity and mortality [16]. Most of the patients are usually unbooked and present late in labour [17] as is the case in this study. Pregnancy induced hypertension and eclampsia are major causes of maternal and perinatal morbidity and mortality in developing countries and Nigeria [17].

Maternal mortality of 4 women occurred after caeserean section in which the indications for CS were obstructed labour and eclampsia. The leading clinical cause of death was sepsis in patients with pre-existing chorioanmionitis [9]. Pre-eclampsia is a major cause of maternal mortality and morbidity and foetal loss but particularly in the third world [18]. Eclampsia is an ongoing challenge for the whole medical community, the root of which lies on poverty. To combat this major health problem, drastic changes are needed which require participation of community, government, non-governmental organizations, doctors and nurses for various strategies addressing health education of the community and provision of proper perinatal care to all pregnant women. Furthermore, an early delivery by caeserean section can also improve the perinatal outcome by decreasing the proportion of babies having birth asphyxia. Eclampsia remains a leading cause of maternal and perinatal morbidity and mortality [19]. Women with pre-eclampsia have an increased rate of CS consequent upon the high incidence of intrauterine growth restriction, foetal distress and prematurity [20]. The centre offers antenatal care services but most patients did not utilize it. Pre-eclampsia may have been diagnosed early with possible improved maternal and foetal outcome even in patients with eclampsia and placenta preavia. CS increases the risk of cardiopulmonary morbidity associated with pre-eclampsia [21]. Obstetric haemorrhage has been the leading cause of maternal death in Nigeria and sub-Saharan Africa [22]. CS is central to the management of high-risk pregnancies but may be associated with life threatening complications [23].

Ensuring better access to quality care during pregnancy and childbirth is essential to reduce the large number of stillbirths and early neonatal deaths seen in Africa [24]. Traditional birth attendants (TBA) have made the conditions of patients' worse. The main indications in of CS in industrialized countries are previous caeserean section, foetal distress and breech presentation while in less developed countries, the major indication include cephalo-pelvic disproportion, eclampsia, foetal malpresentation and ante partum haemorrhage. Large numbers of unbooked patients that deliver are shown to have higher caeserean sections rates than booked patients in this environment [6]. There is lack of awareness in our population about the need for antenatal care and supervised delivery [24]. General Hospital Aliero provides antenatal care services yet it is utilized effectively. Patients' preferred home delivery even the few women that attend antenatal still engage the services of TBA and only present in hospital for delivery when things go wrong.

The high maternal morbidity and mortality due to eclampsia in developing countries has been ascribed to late referral, delay in hospitalization, late transportation, unbooked status of patients, and multiple seizures prior to admission [25]. Eclampsia could be prevented in majority of cases if there was early booking for antenatal care, permitting identification of pre-eclampsia and institution of appropriate therapy [26]. Obstructed labour is one of the most common preventable causes of maternal and perinatal morbidity and mortality in developing countries. Its occurrence is regarded as a sign of poor level of obstetric practice in any environment because obstructed labour is due to mechanical difficulties in labour, which take place where access to proper obstetric care might not available or utilized [27] as seen in this study. Emphasis on antenatal care and early presentation in hospital when in labour will go a long way to reduce the incidence of obstructed labour [17].

Maternal mortality from CS has substantially reduced in developed countries to the extent that there may not be a single maternal mortality in several thousands of CS however in developing countries the story is not the same [16]. There is persistent late presentation of pregnant women in labour in the hospital [28]. Unbooked patients present late with complications making surgical intervention inevitable because of foetal distress and prolonged obstructed labour with attendant high perinatal mortality [29]. Interventions aimed at reducing maternal and perinatal morbidity and mortality associated with CS include auditing of the rates, indications for and associated health outcomes [30]. Women have great dislike for caeserean section especially when there is no living child to show for it [13]. Women with caeserean delivery in Nigeria are considered by others to be infidel, not woman enough and are usually objects of social ridicule.

CONCLUSION

This study demonstrated that obstructed labour, eclampsia, pre-eclampsia, prolonged labour and placenta preavia were the commonest indications for caeserean section. Obstructed labour and eclampsia were the major causes of maternal death in this study. Lack of antenatal care and late presentation are also risks for maternal mortality and poor foetal outcome. Emphasis on antenatal care, identification of high risks cases and education of the populace about supervised pregnancy and delivery will help reduce maternal morbidity and mortality including foetal mortality. Lack of antenatal care and late presentation in labour are among the predisposing factors to maternal deaths.

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