

Caesarean Morbidity and Mortality in a Private Hospital in Lagos, Nigeria

Oliver C. Ezechi, Chikezie A. Nwokoro, Bruno K.E. Kalu, Fidelis O. Njokanma and Godwin C.E. Okeke.

Havana Specialist Hospital, 115 Akerele Extension, P.O. Box 4631, Surulere, Lagos, Nigeria

Abstract

Context: Nigerian patients have aversion to caesarean section. However, with better education and increasing safety of the procedure, the acceptability rate appears to be increasing. To sustain this acceptability, adverse outcome from caesarean section must be reduced to the barest minimum.

Objectives: To determine the incidence, morbidity and mortality associated with caesarean section in our centre.

Study Design, Setting and Subjects: A 2-year descriptive study (July 2000-June 2002) from a private hospital in Lagos Nigeria. All mothers that were delivered by caesarean section were included.

Main Outcome Measures: Indications for surgery, Postoperative complications.

Results: There were 391(34.6%) women who had caesarean sections out of 1129 deliveries in the hospital during the period. Postoperative complications occurred in 61 cases (15.6%). All reproductive age groups and parity were involved. The common complications were infectious morbidity (10.8%) postpartum haemorrhage (8.1%), prolonged hospital stay (6.8%) and postpartum anaemia (4.8%). The caesarean section related mortality rate in the hospital was 0.51%.

Conclusion: Though the morbidity and mortality was less than previously reported in our environment, it is high when viewed in the context of the excellent facilities available in our centre and the nature of the patients who come there for treatment.

Key Words: Caesarean Section, Maternal Mortality, Morbidity. [Trop J Obstet Gynaecol, 2002, 19: 97-100]

Introduction

Nigerian patients have a general aversion to caesarean section because of the general belief among our women that abdominal delivery is reproductive failure on their part^{1,2,3}.

Recently with better education and increasing safety of caesarean delivery, the rate appears to be increasing in most Nigerian hospitals^{4,5}. To sustain this increasing acceptability, caesarean section complications must be reduced to very minimal levels; for any morbidity or mortality arising from this not too popular way of delivery will send wrong signals to the already biased populace and hence cause a reversal to status quo. It has also been shown that caesarean section complications are major contributors to maternal morbidity and mortality^{1,4,5}.

This study investigates the complications of caesarean section in our center; information derived would be utilized in preventing recurrence.

Materials and Methods

This descriptive study was conducted at the Obstetrics and Gynaecology Department of Havana Specialist Hospital, Lagos (a private multi-disciplinary hospital) over a 2-year period (July

2000 – June 2002). All patients who had caesarean sections or were referred for caesarean section-related complications were admitted into the study. In all patients except the five referred after caesarean section, the Pfannenstiel incision was used. The referred cases had midline sub-umbilical incision.

Two pints of blood were cross-matched for all patients prior to surgery and arrangements made for more pints of blood if needed. Ampicillin and Cloxacillin combination was used for prophylaxis for five days in all patients except in cases of premature rupture of membrane and other cases with high risk for postoperative infection where gentamicin and metronidazole were added.

All the patients were followed up until they were discharged. Information on socio-demographic characteristics, indication for the caesarean section, intraoperative and postoperative complications were obtained. In patients with one previous caesarean section allowed trial of vaginal delivery, the reason for the discontinuation of the trial is the indication.

Correspondence: Dr Oliver C. Ezechi, Department of Obstetrics & Gynaecology, Havana Specialist Hospital, P.O.Box 4631, Surulere, Lagos, Nigeria. e-mail: oezechi@yahoo.co.uk

The data obtained were coded and fed into an IBM-compatible computer for analysis using the EPI-info statistical package.

Results

During the period under study 1129 deliveries were conducted in the obstetric department of Havana specialist hospital Lagos. Three hundred and ninety one deliveries were by caesarean section giving a caesarean section rate of 34.6%. In 61 (15.6%) of the patients, there were caesarean section-related complications.

Five other patients were referred to the hospital from other private hospitals with post caesarean section complication. There were 2 (40%) mortalities among the referred patients; both were referred late and died within 24 hours of presentation, from shock secondary to gram-negative septicaemia and congestive cardiac failure. The third referral was against the primary surgeon's wish; she presented five days after surgery with frank haematuria and total urinary incontinence. She was managed conservatively and spontaneous healing occurred 91 days later. The fourth patient was referred 10 days after surgery with peritonitis and paralytic ileus. She had peritoneal lavage done for an intra-abdominal abscess, and was discharged 23 days later. The fifth patient had wound sepsis and partial wound dehiscence. Her relations brought her on the fifth day post surgery, against the wish of the primary surgeon. She had conservative management and was discharged 31 days later, after secondary wound suturing.

Table 1
Sociodemographic Characteristics of Patients with Caesarean Morbidity

<i>Characteristic</i>	<i>Number (%)</i>
Age (years)	
≤ 19	2 (3.0)
20-24	7 (10.6)
25-29	21 (31.8)
30-34	26 (39.4)
≥ 35	10 (15.2)
Parity	
1	23 (34.8)
2 - 4	37 (56.1)
≥ 5	6 (9.1)
Booking Status	
Booked	52 (78.8)
Unbooked	14 (21.2)

Table 1 shows the sociodemographic characteristics of the 66 patients (61 operated in our hospital and 5 operated outside) who had post-caesarean section complications. All reproductive age groups and parity were involved. Fifty-two (78.8%) patients were booked. Forty-eight (72.7%) patients had emergency caesarean section, while only 18 (27.8%) had elective surgery.

The indications for surgery among the patients included cephalopelvic disproportion in twenty two (32.8%), antepartum haemorrhage in 15 (22.4%), previous caesarean section in 15 (22.4%), malpresentations in 12(17.9%), failed induction in 10(14.9%) patients. Other indications included fetal distress in 7 (10.6%), prolonged/obstructed labour in 4(6.0%), cord prolapse in 2 (3.0%), IVF pregnancy in one (1.5%), and bad obstetric history in four (6.0%) patients. There was more than one indication in 19 patients (28.4%). Of the fifteen patients that had surgery because of previous caesarean sections, one, three and six patients had undergone 4, 3 and 2 previous caesarean sections respectively. The remaining five patients had only one previous caesarean section. Three of the five patients that had one previous caesarean section had elective surgery because of suspected cephalopelvic disproportion (CPD) and fetal macrosomia. Further analysis showed that 4 patients with previous caesarean section originally billed for elective caesarean section presented in labour and had emergency surgery. Among the parturients that had caesarean section because of CPD, 86.4% (19) were emergency surgery unlike in the caesarean section due to antepartum haemorrhage, previous caesarean section and malposition/ abnormal lie, in 53.3%(15), 73.3%(11) and 75.0%(9) of were elective surgeries respectively.

The commonest complications were the infectious morbidities of wound infection, puerperal pyrexia, genital sepsis and urinary tract infection. They accounted for more than 65% of all complications as shown in Table 2. Thirty-two (8.2%) had postpartum haemorrhage; of these patients with post partum haemorrhage, twenty-six cases (81.3%) occurred intraoperatively. Twenty-one patients who had emergency surgery accounted for 65.6% of all cases of postpartum haemorrhage. The causes of the postpartum haemorrhage were uterine atony, placenta praevia, abruptio placenta, pathologically adherent placenta and extension of uterine incisions into the broad ligament or the vagina. Four patients (1.0%) had hysterectomy performed because of the uncontrollable haemorrhage. One patient had an anaesthetic complication - slow metabolism of muscle relaxant - and was on an artificial ventilator

for 6 hours. She recovered following a second dose of neostigmine and was discharged 7 days later.

Four maternal deaths occurred. Two (50%) of these deaths were in unbooked patients who had surgery before presentation. The two other maternal deaths were in booked patients. Both developed disseminated intravascular coagulopathy following hysterectomy for massive post partum haemorrhage after emergency caesarean section. No maternal death occurred among the group that had elective caesarean section.

Table 2

Complications After Elective and Emergency Caesarean Sections

<i>Complication</i>	<i>Emergencies N(%)</i>	<i>Electives N(%)</i>	<i>Total N(%)</i>
Infectious Morbidity	32 (66.7)	11 (61.1)	43 (65.2)
Wound Infection	21 (43.8)	10 (55.5)	31 (47.0)
Postpartum Haemorrhage	20 (41.7)	12 (66.7)	32 (48.5)
Prolonged Hospital Stay (>7days)	18 (37.5)	9 (50.0)	27 (40.9)
Postpartum Anaemia	13 (27.1)	6 (33.3)	19 (28.8)
Puerperal Pyrexia	11 (22.9)	4 (22.2)	15 (22.7)
Urinary Tract Infection	5 (10.4)	2 (11.1)	7 (10.6)
Genital Sepsis	4 (8.3)	1 (5.6)	5 (7.6)
Caesarean Hysterectomy	4 (8.3)	0 (0.0)	4 (6.1)
Maternal Death	4 (8.3)	0 (0.0)	4 (6.1)
Bladder Injuries	2 (4.2)	1 (5.6)	3 (4.5)
Intraabdominal Abscess	1(2.1)	0 (0.0)	1 (1.5)
Anaesthetic Complication	1(2.1)	0 (0.0)	1 (1.5)
Total Number of Patients	48 (100)	18 (100)	66 (100)

Discussion

The fact that caesarean section, a potent tool for averting life threatening problems of pregnancy and labour, is fraught with problems and dangers^{2,3} was confirmed in this study with a 15.6% complication rate. Though lower than 44.4% reported elsewhere in Nigeria⁴, it is still very high given the excellent facilities available to us. It must therefore be addressed, since equipment alone do not make a good hospital but dedication and commitment of staff, quality of service offered, attention to little details and prompt response to emergencies.

Emergency caesarean sections accounted for nearly 73 % of the patients with complications. This might have been because, in emergency situations, detailed precautions to reduce complications before and during surgery may have been waived in order to salvage the fetus or to prevent more serious maternal morbidity or death. However, to reduce the risk in future, closer monitoring of patients must be ensured and early signs of complications identified.

As in several earlier reports^{1,2,3,4,5,6}, cephalopelvic disproportion was the commonest indication for caesarean section and emergency surgery. Quite unfortunately, previous caesarean section is another common indication for surgery (22.4%) and this means an increase in caesarean sections rate in subsequent pregnancies. Attempts must be made to reduce caesarean section rate, especially in areas of loose indications like bad obstetric history, precious baby, prolonged infertility and fetal distress. What is required in these conditions is close monitoring of fetomaternal parameters and reserving caesarean section purely for obstetric indications.

Despite the use of prophylactic antibiotics in all the patients, infectious morbidity was still common. The frequency of infectious morbidity is similar to those reported in developing countries by Gall⁷ and Creighton⁸, although much lower than the 30.2% reported by Chama in Maidugri, Nigeria⁴.

The significance of late referral is highlighted in this study. Two of the patients referred may have been saved if they were referred earlier. This is a common problem in developing countries and more especially in our environment where necessary interventions are delayed because of non-availability of hospital admission deposits. "Protection" of the ego of referring doctor is another reason for late referrals, believing that referral of patients to another hospital is an acceptance of his clinical incompetence and thus reducing patient's patronage. Therefore most patients are referred only to avoid death in their hospitals which is "not good for business" but not in the interest of the patient. Even when referred at the appropriate time, poverty and dependence on relations make the patients to seek care in ill equipped and poorly staffed hospitals.

The caesarean section mortality of 0.51% was less than 1.0 and 4% reported by Chama *et al*⁴ and Megafu¹⁰, but higher than 0.01-0.04% reported by Hickl¹¹. Delay in the decision for a caesarean hysterectomy in the patient with severe post partum haemorrhage may have accounted for the death of the two-booked patients. The delayed decisions were partly due to their low parity and obtaining consent from relations for a hysterectomy, since in

our environment, removal of the uterus is seen as removal of femininity. In future, early recourse to caesarean hysterectomy when all conservative options have failed, irrespective of parity, may prevent maternal death.

In conclusion, in order to reduce caesarean section-related morbidity and mortality, efforts must be made to reduce the rate of caesarean sections,

especially emergency caesarean sections. All patients undergoing surgery should be well prepared, irrespective of indication, in order to reduce the incidence and severity of complications. Antibiotic prescription pattern must be reviewed from time to time and blood should be available for all caesarean sections irrespective of indication.

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