

Caesarean Morbidity in a Northern Nigeria tertiary health centre

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Abstract

Background: The popularity of caesarean section in developed countries is anchored on the increasing safety of the procedure. In Nigeria, there is a general aversion to the procedure. Regular auditing of morbidity trends following the procedure with a view to improving safety remains central to the acceptability of the procedure in our environment. The aim of this study is to determine the incidence and nature of morbidities complicating caesarean section at the Federal Medical Centre Makurdi.

Method: A three-year retrospective study from January 2004 to December 2006 involving all mothers who had caesarean delivery at the Federal Medical Centre Makurdi was conducted.

Results: There were 4011 deliveries during the study period of which 420 were caesarean deliveries giving a caesarean section rate of 10.5%. Caesarean section related complications occurred in 87 patients giving a caesarean morbidity rate of 20.7%. Seventy one (81.6%) patients developed caesarean morbidity following emergency caesarean section. The commonest complications were infections (42.1%), postpartum anaemia (34.3%) and postpartum haemorrhage (17.9%).

Conclusion: Though the caesarean morbidity in our centre is better than most reports in this country, there is much room for improvement.

Introduction

Caesarean delivery is one of the oldest operations in medical history with far reaching effects on the modern practice of obstetrics.¹ The incidence of caesarean section has been increasing.² In the United States of America, it increased from 3% in 1937³ to above 30% in 2005⁴ largely due to the decreased risk of maternal and neonatal complications.⁵ In developing countries like Nigeria, aversion to caesarean section^{6,7} partly because of maternal and foetal hazards, constitutes a very formidable obstacle to safe motherhood.⁸ Recently, with better education and increasing safety of caesarean delivery, the rate appears to be increasing in most Nigerian hospitals.⁹ To sustain this acceptability, caesarean section

complications must be reduced to very minimal levels.⁶

This study reviews all caesarean sections performed during the study period in our centre with a view to analyzing the morbidity pattern(s) and proffering suggestions on improvement.

Subjects and methods

This retrospective study was conducted at the Department of Obstetrics and Gynaecology, Federal Medical Centre Makurdi in North – Central Nigeria. Analysis of all patients who had caesarean section in the centre over a three year period between January 2004 and December 2006 was done. The records of all 420 patients who had caesarean section in the centre during the period of review were retrieved from medical, theatre and labour ward records. Details extracted included age, parity, booking status, indication for caesarean section, use of prophylactic antibiotics, type of caesarean section, intraoperative and postoperative complications, and duration of hospital stay. The data was manually analyzed.

Results

During the study period there were 4011 deliveries of which 420 were by caesarean section (351 emergency and 69 elective) giving a caesarean section rate of 10.5%. There were caesarean section related complications in 87 patients giving a caesarean morbidity rate of 20.7%. Seventy one (81.6%) of the 87 complicated cases followed emergency caesarean section while 16 (18.4%) had elective caesarean section. This translated to 20.2% and 23.2% of patients who had emergency and elective caesarean section respectively, developing complications.

The age range of patients with caesarean morbidity was 19 to 42 years. Table I shows the sociodemographic characteristics of the 87 patients who had caesarean morbidities. The patients cut across all reproductive age groups and parity. Fifty four (62.1%) patients were booked. The caesarean morbidities led to prolonged hospital stay (more than seven days) in 68 (78.2%) of the complicated cases. Of the 68 prolonged hospitalizations, 58 (86.8%) had emergency caesarean section.

The main indications for surgery were cephalopelvic disproportion in 27 (31%), antepartum haemorrhage in 16 (18.4%), fetal distress in 15 (17.2%), previous caesarean section in 12 (13.8%) and eclampsia/severe pregnancy induced hypertension in 6(6.9%) patients. Other indications were failed induction of labour in 4 (4.6%), HIV infection in pregnancy and breech presentation/ abnormal lie/ malposition in 3 (3.5%) each, and cord prolapse in 1 (1.1%) patient. Of the 12 patients who had surgery because of previous caesarean section, one, three and two had undergone 4, 3 and 2 previous caesarean sections respectively. The remaining five patients had one previous caesarean section.

	Emergency CS	Elective CS	Total
Age (yrs)			
<20	2	1	3
20-24	9	2	11
25-29	22	2	24
30-34	27	4	31
>35	11	7	18
Parity			
1	28	4	32
2-4	40	5	45
>5	3	7	10
Booking Status			
Booked	38	16	54
Unbooked	33	0	33

Table I: Demographic Characteristics of Patients with Caesarean Morbidity

The commonest complications following caesarean section were infections and postpartum anaemia accounting for 42.1 and 34.3% of caesarean morbidity respectively as shown in table II. The infections included - wound infection (26), puerperal pyrexia (16), genital sepsis (10), urinary tract infections (4) and pelvic abscess (3). Twenty five (17.9%) of the patients had postpartum haemorrhage, 17 (68.0%) of these occurred intraoperatively. The causes of postpartum haemorrhage were uterine atony in 11 (44.0%), placenta praevia in 7 (28.0%), placenta abruption in 4 (16.0%) and extension of uterine incision into the uterine artery in 3 (12.0%). Three (2.1%) patients had caesarean hysterectomy for uncontrollable haemorrhage while bladder injury occurred in three (2.1%) patients. One (0.7%) patient developed vesicovaginal fistula following emergency caesarean section for two previous caesarean sections (presented in established labour). Burst abdomen accounted for one (0.7%) patient. Twenty nine patients presented with multiple complications.

Discussion

Though a major tool in the reduction of maternal and perinatal morbidity and mortality⁸, caesarean section is not without risk of morbidity¹⁰ as revealed by this study. The complication rate of 20.7% in this study was much lower than the 44.4% reported in Maiduguri⁹ and 39.3% reported in Benin.¹ It was however higher than the 15.6% reported in a Lagos private hospital.⁶ Emergency caesarean sections accounted for 81.6% of patients with complications. This was higher than 73% reported in Lagos.⁶ Though elective caesarean sections accounted for only 18.4% of the morbidities, 23.2% of patients who had elective caesarean delivery developed complications. This confirms that caesarean section is characterized with morbidity even when performed as a planned procedure.^{11,12} Patients that demand caesarean

delivery without medical indications have to be informed and aware of these facts.¹²

Complication	Emergency	Elective	Total
Infections	54	5	59
Postpartum Anaemia	41	7	48
Postpartum Haemorrhage	19	6	25
Bladder Injury	3	0	3
Caesarean Hysterectomy	3	0	3
Obstetric Fistula	1	0	1
Burst Abdomen	1	0	1

Table II: Caesarean Section related complications

Cephalopelvic disproportion was the commonest indication for caesarean section as in several earlier reports.^{4,13,14} Infections accounted for 42.1% of complications in this study despite the use of prophylactic antibiotics in all patients. The frequency of infections was lower than 65% reported in Lagos⁶ but higher than 30.2% reported in Maiduguri.⁹ Postpartum haemorrhage accounted for 17.9% of caesarean morbidities in this study. This was higher than 8.2% reported in Lagos.⁶ Postpartum haemorrhage is also a documented complication of the procedure elsewhere in the developed countries.¹⁵ Placenta praevia and abruption were identified risk factors for postpartum haemorrhage in this study. The risk of major bleeding in a subsequent pregnancy from placenta praevia and placental abruption has been put at 5.2 per 1000 and 11.5 per 1000 live births respectively elsewhere.¹⁶ Despite the complications associated with caesarean delivery as seen in this study, certain birth complications like urinary and faecal incontinence occur more with vaginal birth.^{17,18}

In conclusion, the caesarean morbidity in our centre can be reduced by paying more attention to patient preparation for all types of caesarean section. Specifically, strict adherence to asepsis before, during and after procedures and appropriate precautionary measures, such as timely and judicious use of oxytocics will be beneficial. Regular review of antibiotic sensitivity patterns in our centre may improve patient response.

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