ORIGINAL ARTICLE

Elective Caesarean Section At The Federal Medical Centre Makurdi, North Central Nigeria

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Abstract

Background: *Elective caesarean section is associated with less risk of adverse events compared to emergency caesarean section. Paradoxically, emergency caesarean deliveries continue to form the bulk of caesarean deliveries in our facility. The aim of this study is to determine the caesarean section rate, ascertain the trend of elective caesarean section, indications for elective caesarean section and elective caesarean mortality.*

Methods: *A retrospective analysis of the clinical records of all patients that had caesarean section between January 2004 and December 2006 at the Federal Medical Centre Makurdi was conducted.*

Results: *There were 4011 deliveries with 420 caesarean sections during the review period giving a caesarean section rate of 10.5%. The elective caesarean sections accounted for 69(16.4%) while emergency caesarean sections accounted for 351(83.6%) of all caesarean sections. The rate of elective caesarean section increased from 10.3% in 2004 to 22.8% in 2006 of all caesarean sections. Two or more previous caesarean sections were the commonest indication for elective caesarean section accounting for 23.2% of cases, followed by HIV infection in pregnancy accounting for 21.7% of cases. No maternal death occurred with elective caesarean section.*

Conclusion: *There is a rising trend of elective caesarean section presently accounting for 1 out of every 6 caesarean sections in the centre. The commonest indication for elective caesarean section was two or more caesarean sections, followed by retroviral disease in pregnancy. Elective caesarean section remains safer than emergency caesarean section in our facility.*

Key Words: *Elective, Planned, Emergency, Caesarean section, Nigeria*

INTRODUCTION

Caesarean section is the commonest major surgical procedure in modern obstetric practice.[1] It is performed for women with high risk pregnancy and complicated labour to protect the mother and foetus from the anticipated complications of delivery through natural passages.[2] It can be a planned or an emergency procedure; the planned procedure, also referred to as an elective caesarean section is not urgent and may be scheduled well in advance, at a time when it is convenient for the obstetrician, neonatologist, anaesthetist and the patient.[3] The decision is taken before or during the pregnancy and planned for at term or as close to term as is possible.[4] The greater risk of adverse events following emergency caesarean delivery[5] indicate that, at a certain level of risk of emergency caesarean delivery, a strategy of delivering all women by a planned procedure may actually carry a lower risk of adverse events directly attributable to surgery.[6]

Indications for elective caesarean section include repeat caesarean section, placenta praevia, precious baby, severe pregnancy induced hypertension, bad obstetric history, multiple pregnancies, abnormal presentations/lie, fetal macrosomia, previous myomectomy and HIV infection in pregnancy.[3,7,8,9]

A major disadvantage of elective caesarean section however, is that a mistake made in calculating and assessing the gestational age can result in the delivery of a preterm infant[3] with attendant consequences. Anaesthetic complications are more likely to occur in patients who need emergency caesarean section, and are administered general anaesthesia sooner than 4 6 hours after taking foods and fluids.[10] The risk of maternal mortality is higher than that associated with vaginal birth but much lower than that of emergency caesarean section.[11] This review on elective caesarean section is informed by the paucity of publications on the subject, locally and internationally, as observed elsewhere.[3]

SUBJECTS AND METHOD

This was a retrospective analysis of 420 consecutive caesarean sections performed at the obstetric unit of the Federal Medical Centre Makurdi Nigeria over a three year period between January 2004 and December 2006. The case files of all patients that had caesarean section during the period of review were retrieved from the medical, theatre and labour ward records. Details extracted included, age, parity, type of caesarean section, indication(s) for caesarean section and maternal mortality following the procedure. The data was analyzed manually.

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RESULTS

There were a total of 4011 deliveries during the study period out of which 420 were caesarean deliveries giving a caesarean section rate of 10.5%. Of the 420 caesarean sections performed during the study period, 351(83.6%) were emergency procedures while 69(16.4%) were elective caesarean sections.

Table I shows the annual distribution of the types of caesarean section. There was a steady rise in elective caesarean section over the study period from 10.3% in 2004 to 22.8% of all caesarean sections in 2006. The age range of the patients was between 18 and 45 years with a mean of 29.4 ± 5.7 years. The frequency of elective caesarean section was highest in the 30 34 years age group which had 18(26.1%) women.

There was a concomitant decrease in the rate of emergency caesarean section with a gradual rise in the rate of elective caesarean section. Table I shows a decline in the rate of emergency caesarean sections from 89.7% in 2004 to 77.2% of all caesarean sections in 2006.

Table II shows the indications for the elective caesarean sections during the study period. The commonest indication for elective caesarean section was two or more previous caesarean sections accounting for 23.2% of cases. HIV infection in pregnancy accounted for 21.7% of cases. All 9 maternal deaths followed emergency caesarean sections.

TABLE I ANNUAL DISTRIBUTION OF CAESAREAN SECTION (EMERGENCY/ELECTIVE)

YEAR	TOTAL C/S	EMERGENCY C/S	%	ELECTIVE C/S	%
2004	145	130	(89.7)	15	(10.3)
2005	117	99	(84.6)	18	(15.4)
2006	158	122	(77.2)	36	(22.8)
TOTAL	420	351	(83.6)	69	(16.4)

KEY: C/S = caesarean section

TABLE II INDICATIONS FOR ELECTIVE CAESAREAN SECTION

INDICATION	NUMBER	%
Two or more previous C/S	16	23.2
HIV infection in pregnancy	15	21.7
One previous C/S + other obstetric risk factors	12	17.4
Breech presentation	6	8.7
Unstable/transverse lie	5	7.2
Placenta praevia	4	5.8
Bad obstetric history	4	5.8
Borderline pelvis	3	4.3
Hypertensive disorders in pregnancy	2	2.9
Fetal macrosomia	1	1.5
Elderly primigravida + uterine fibroids	1	1.5
TOTAL	69	100.0

KEY: C/S = caesarean section

DISCUSSION

The caesarean section rate in this review was 10.5%. This was similar to the caesarean section rate of 10.2% reported in Kaduna[1] and 11.4% in Iyi Enu Mission Hospital, but much lower than the 15.8%[3] and 18%[7] reported in Jos, 22.2%[12] reported in Benin and 34.6%[13] reported in Lagos, all in Nigeria. This wide variation is not suprising as the incidence of caesarean section varies from region to region and from one country to another.[3]

There was a progressive increase in the rate of elective caesarean section relative to emergency caesarean section during the review period. In 2004, there was 1 elective caesarean section to 8 emergency caesarean sections. This ratio increased to 1 to 5.5 in 2005 and 1 to 3 in 2006. Of the caesarean sections done during the study period, 16.4% were elective procedures while 83.6% were emergency procedures. The percentage of elective caesarean sections in this study was slightly higher than the 14.8%[3] reported in Jos but lower than the 25.7% reported at the Iyi Enu Mission Hospital.[4] All three studies however showed a decline in the incidence of emergency caesarean sections with a concomitant rise in elective caesarean sections. Better patient selection, increase in the cohort of patients with two or more previous caesarean sections, new or emerging indications for the procedure such as HIV positivity in pregnancy may be responsible for this finding.[3]

The commonest indication for elective caesarean section in this study was two or more previous caesarean sections. This finding was in agreement with studies in Jos.[3,7] However, where as HIV infection in pregnancy was the second commonest indication in this study accounting for 21.7% of cases, it only accounted for 2.7% of cases in Jos.[3] This may be explained in part by the fact that the city of Makurdi has a high incidence of the HIV/AIDS pandemic.[14] In developed countries, a growing number of women request for delivery by caesarean section without an accepted medical indication.[11,15] This appears not to be the case in this study and other studies in this country.[3,4,7,10,13] This may be due to the documented aversion to caesarean section in Nigeria.[16,17] No maternal death was recorded among patients offered elective caesarean section in this study. This was in agreement with an earlier study in a Lagos specialist hospital.[13] Maternal mortality rates of 5.9 for elective caesarean section, 18.2 for emergency caesarean section and 2.1 for vaginal birth, per 100000 completed pregnancies have been reported in the United Kingdom.[18]

In the face of the increasing trend of elective caesarean section, our obligation as providers is to educate patients about the trade offs entailed in choosing a particular course or intervention and to ensure that their choices are congruent with their philosophy, plans, and tolerance of risk.[19]

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