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COMPARISON OF INDICATIONS FOR CESAREAN SECTION IN ZARIA, NIGERIA: 1985 AND 1995

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Abstract
Background: Cesarean section (CS) rates and indications give a reflection of the maternal health status in the environment. This study was carried out to compare the CS rates and indications in this unit in 1985 and 1995, with a view to determining changes in the health seeking behaviour and possibly maternal health of women in Zaria and its environs.
Method: A retrospective review of the records of CS performed in 1985 and 1995.
Results: The cesarean section rates in this center in 1985 (9.21%) and 1995 (11.41%) are within the range reported previously. The CS rate was significantly higher in 1995 as compared to 1985 ($p = 0.02$). Cephalo-pelvic disproportion and its sequelae formed the majority of indications for CS unit in both 1985 and 1995 but the proportion constituted by this indication was significantly lower in 1995 ($p = <0.001$). Placenta praevia and breech presentation formed significantly greater proportions of the indications for CS in 1995 than in 1985 ($p = 0.001$ and <0.001, respectively).
Conclusion: These findings suggest some improvement in the maternal health among women that utilize the services of this hospital, which may be a reflection of the situation in the general population. The changes observed may also have resulted from improved diagnostic facilities, increased awareness and referral of problem cases, and the more liberal policy towards CS deliveries and the current trend away from difficult vaginal deliveries. There is a need to maintain and improve public enlightenment programs on issues affecting the health of mothers in this environment.

Key words: Cesarean section, indications

Introduction

Cesarean section (CS) rates and indications vary in different centres and often give a reflection of the maternal health status in the environment. The rates vary from 6.4% to 32.1%.[1-6] The main indications in industrialized countries are previous CS, fetal distress, and breech presentation while in less developed countries, the major indications include cephalo-pelvic/ feto-pelvic disproportion, eclampsia, fetal malpresentations and antepartum haemorrhage.[1-6] In northern Nigeria, the major indications include obstructed labour, eclampsia, prolonged labour, and fetal distress as has been reported from Zaria.[1] This is as a result of the early marriage and poor health seeking behaviour by women in this environment, mostly due to ignorance and poverty.[7] Zaria is located in the North-central zone of Nigeria and the indigenous population are predominantly Hausa/Fulani Muslims although there are settlers from the various parts of the country. Zaria has numerous primary health centers and one secondary health center. Ahmadu Bello University Teaching Hospital is the only tertiary health institution in the state and serves not only as a referral center but also as a primary and secondary health center.

The objective of this study was to compare the CS rates and indications in this unit in 1985 and 1995 (midpoints of the respective decades), with a view to determining changes in the health seeking behaviour and possibly maternal health of women in Zaria and its environs.

Materials and Methods

Records for all CS performed in Ahmadu Bello University Teaching Hospital, Zaria, in 1985 and 1995 were obtained from both the delivery records and the operation records. The primary indication for cesarean section was recorded in each instance for example, in cases of prolonged obstructed labour with fetal distress; it was recorded as prolonged obstructed labour. Fetal distress, pre-eclampsia, and eclampsia were recorded where these formed the sole indication for the operation (for example fetal distress due to cord problems, pre-eclampsia with uncontrollable hypertension, or eclampsia with uncontrollable fits).

Results

The total deliveries were 4,127 and 1209, while the CS rates were 9.21% and 11.41% for 1985 and 1995, respectively. The difference (2.2%) was statistically significant ($\chi 2 = 5.20$, $p = 0.02$). The CS was performed electively in 46 cases (12.1%) in 1985 and 10 cases (7.3%) in 1995. The difference between these proportions (4.9%) was not statistically significant ($\chi 2 = 2.48$, $p = 0.12$). CS formed a significantly higher proportion of all operations in the unit in 1995 (37.8%) than in 1985 (22.3%); $\chi 2 = 38.68$, $p = <0.001$). Details of the indications are shown in Table 1 below.

Table 1: CS indications in A.B.U.T.H., Zaria, in 1985 and 1995

CS indications	1985		1995		% difference (95% confidence intervals)	χ 2 (p value)
	Present	Absent	Present	Absent		
CPD	184	196	44	94	16.5 (7.2, 25.8)	11.24 (0.001)
≥2 previous CS	67	313	23	115	0.9 (-6.4, 8.2)	0.07 (0.80)
Fetal distress	25	355	5	133	1.3 (-2.9, 5.5)	1.62 (0.20)
Pl. praevia	24	356	21	117	8.5 (2.4, 14.6)	10.11 (0.001)
Failed trial	14	366	5	133	2.8 (-1.5, 7.1)	0.001 (0.97)
PET/eclampsia	12	368	11	127	4.8 (-0.1 9.7)	5.53 (0.019)
Trans/compd	16	364	5	133	0.6 (-3.5, 3.9)	0.09 (0.76)
Breech	6	374	12	126	7.1 (2.2, 12.0)	15.29 (<0.001)
Others	32	348	12	126	0.3 (-5.2, 5.8)	0.01 (0.92)

Key
CS = cesarean section
CPD = cephalopelvic disproportion
Pl. praevia = placenta praevia
Failed trial = failed trial of scar
PET = pre-eclampsia
Trans/compd = transverse/compound presentation

Discussion

The cesarean section rates in this center in 1985 (9.21%) and 1995 (11.41%) are within the range reported previously.[1-6] The CS rate was significantly higher in 1995 as compared to 1985 ($p = 0.02$). This may have been due to the introduction of hospital fees in this center in the early 1990s, reducing the overall number of hospital deliveries with mainly difficult deliveries presenting to the hospital as a last resort. The current trend away from difficult vaginal deliveries and more liberal CS policy may also be partly responsible for the higher CS rate in 1995. The rate of elective and emergency CS was not significantly different between the two years studied with emergencies constituting over 70% of all CS. This may be as a result of the large numbers of unbooked patients that deliver in the unit as they have been shown to have higher CS rates than booked patients (18.2% compared to 6.4%) in this environment.[1]

Cesarean section a significantly higher proportion of all obstetric and gynaecology operations in the unit in 1995 compared to 1985. This may also reflect the fact that the women in Zaria utilize the services of this hospital only as a last resort and utilizing other orthodox and alternative health facilities that are less expensive for less dire situations. The proliferation of public and private health facilities in Zaria and its environs may be partly responsible for the reduction in the number of patients that deliver or have surgery in this hospital.

Cephalo-pelvic disproportion formed the majority of indications for CS in this unit in both 1985 and 1995 but the proportion constituted by this indication was significantly lower in 1995 ($p = <0.001$). This may suggest improved maternal health in the community probably as a result of improved health seeking behaviour due to the various campaigns to raise public awareness on these issues. Placenta praevia and breech presentation formed significantly greater proportions of the indications for CS in 1995 than in 1985, suggesting increased awareness and referral of problem cases, and improved diagnostic facilities. This may also be a reflection of the more liberal policy of CS for breech presentation especially in primigravidae.

These findings give a reflection of the maternal health situation among women who utilize the services of this hospital, and perhaps the general population in Zaria, suggesting a gradual but definite improvement. There is a need to maintain and improve the public enlightenment programs on issues affecting maternal health in this environment, especially as the age at marriage has remained below 16 years in this environment.[1, 7]

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