

REVIEW OF CAESAREAN SECTIONS AT LYARI GENERAL HOSPITAL

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ABSTRACT

Objective: To determine the indications, morbidity and foetal outcome of Caesarean section in our set-up.

Design & Duration: Cross sectional study from July 2005 to December 2006.

Setting: Gynaecology & Obstetrics Unit V, Sindh Govt. Lyari General Hospital, Karachi.

Patients: All patients undergoing Caesarean section.

Methodology: Details of all cases including patients' characteristics, operative details, outcome and post-operative complications were recorded on a pre-designed proforma, and analyzed.

Results: A total of 202 patients underwent Caesarean sections during the study period; the Caesarean section rate being 22.3%. Amongst these 26.2% patients were primigravidae, 56% were non-booked and 96.5% patients had co-morbid conditions. Dystocia (18.8%) was the most common indication for primary section, followed by malpresentations (17%) and foetal distress (17%). The frequency of repeat Caesarean sections was 42%, contracted pelvis being the commonest (37.2%) indication. Wound infection was the commonest maternal complication seen in 6.4% cases, while 13.3% babies suffered birth asphyxia. The perinatal mortality rate was 47.6/1000 births.

Conclusion: Primary Caesarean section should be performed with clear justification. Pregnant women should be educated to seek antenatal care for early identification and management of problems. Unskilled birth attendants should be trained for early referral, as this will reduce maternal and perinatal morbidity and mortality.

KEY WORDS: Caesarean Section, Maternal Morbidity, Perinatal Morbidity, Perinatal Mortality

INTRODUCTION

Caesarean section is the commonest operation performed in Obstetrics and Gynaecology; in 1984 Caesarean delivery became the number one in-hospital operative procedure in the United States¹. A worldwide trend of increasing Caesarean delivery rates has been reported in many countries²⁻⁵. In 1980 the Caesarean section rate in England was 9%, that rose sharply to 21.3% in 2000⁶. A similar picture has been reported from Italy⁷. The maximum rise was seen in Mexico i.e. from 14.6% in 1976 to 43% in 1995⁸.

The Caesarean birth has been sporadically reported throughout medical history, but it is only during the last century that it has been technically refined and rendered safe for both the mother and the foetus. The evolution of the Caesarean section in the 20th century was characterized by the development of the lower segment technique, anaesthetic proficiency, availability of blood products and antibiotics, recognition of foetus as a patient, feasibility of vaginal birth after the Caesarean, and the acceptance of this procedure by women and its request as the preferred route of delivery.

The decision to deliver by Caesarean section is often multifactorial and rests on balancing health risks of the mother and the foetus. Dystocia, suspected foetal compromise, malpresentations and previous Caesarean births account for more than 70% cases of the Caesarean deliveries⁸⁻¹⁰.

Antecedent of first Caesarean section is an important risk factor for subsequent Caesarean sections. A deeper

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knowledge of the causes of and indications of primary Caesarean section are required in order to have a direct influence on the prevalence of repeat Caesarean section.

Unnecessary Caesarean sections not only increase the medical costs, but also provoke unfavourable repercussions for both the mother and her foetus¹¹. Caesarean birth compromises the obstetric future of a woman and exposes her to significant morbidity in repeat surgeries. Availability of adequate blood, aseptic techniques, good surgical practice, seniority of the personnel matching the risk involved are obvious ways to keep morbidity and mortality to a minimum.

This study was carried out to have an overview of the current situation of Caesarean sections at Lyari General Hospital and to determine the outcome in relation to the indications of surgery.

PATIENTS & METHODS

This cross-sectional study was conducted in the Department of Gynaecology & Obstetrics, Unit V, Dow Medical College and Sindh Government Lyari General Hospital,

Karachi from July 2005 to December, 2006.

All patients undergoing Caesarean section were included in the study. A pre-designed proforma was filled in for all patients by the post-graduate student assisting the surgery. Demographic features of the patient, booking status, condition and management on arrival, indication for section, operative details and neonatal outcome were recorded. Complications of the operation during hospital stay were also recorded. The data of the patients was entered and analyzed on computer using programme SPSS version 11.

RESULTS

During the 18 months study period a total of 906 deliveries were conducted including 202 (22.3%) Caesarean sections. The mean age of the patients was 27.4 years. Majority of the patients had a parity between 1-4. Around 56% patients were non-booked, 54% reported in emergency (Table I) and most were in an precarious condition. Majority (96.5%) of the patients had one or more co-morbid conditions, the commonest being anaemia (85%); 3.5% cases were severely anemic.

Table I. Demographic data of Caesarean Section patients

Feature		Number	%
Parity	0	53	26.2
	1-4	117	57.9
	5	32	15.9
Booking Status	Booked	88	43.6
	Non-booked	102	50.5
	Dai handled	12	5.9
Admission Mode	OPD	93	46
	Emergency	109	54
Condition on Arrival	1st stage labour	74	36.6
	2nd stage labour	21	10.4
	Antepartum hemorrhage	22	10.9
	Impending rupture	5	2.5
	Obstructed labour	17	8.4
	Stable	63	31.2
Foetal Heart Rate	Normal	150	74.3
	Abnormal	49	24.3
	Absent	3	1.4

Indication	No.	%
Dystocia	22	18.8
Malpresentation	20	17.1
Foetal Distress	20	17.1
Antepartum Haemorrhage	17	14.5
Obstructed Labour	13	11.1
Others	25	21.4

Table II. Indications of Primary Caesarean Section (n=117)

Majority (66.8%) of Caesarean sections were performed as an emergency procedure. The mean blood loss was 350 cc; blood transfusion was required in only 16.8% cases. The frequency of primary Caesarean section was 58% and the main indications were dystocia, malpresentation, foetal distress, antepartum haemorrhage and obstructed labour (Table II). The most common indication for second repeat section was a contracted pelvis, seen in 37.2% cases (Table III). Although most of the previous two and more Caesarean sections were done as planned procedures, still 14.3% were performed in emergency.

No maternal death occurred during the study period, while common maternal complications were wound infection and post-partum haemorrhage (Table IV). Twenty eight (13.3%) neonates required Neonatal ICU admissions due to birth asphyxia; 79% of these cases were non-booked and 82% were born of emergency sections. The main indications for these sections were foetal distress, non-progress of labour, obstructed labour, etc as shown in Table V.

There were 10 perinatal deaths giving rise to a Perinatal mortality rate of 47.6/1000 births. All fresh still births had absent foetal heart sounds on admission. All of them were non-booked cases and required surgery for maternal indications. Amongst the neonatal death cases 66.6% patients were non-booked and 83.3% had to un-

Table IV. Maternal Morbidity (10.3%)

Type	No.	%
Wound Infection	13	6.4
Post-partum Haemorrhage	6	2.9
Caesarean Hysterectomy	2	1.0
Wound Haematoma	1	0.5
Peritonitis	1	0.5

Indication	No.	%
Contracted Pelvis	16	37.2
Malpresentation	5	11.6
Severe PIH	5	11.6
Obstructed Labour	4	9.3
Non-progress of Labour + Malposition	4	9.3
Impending Rupture	3	7.0
Twin Pregnancy	2	4.7
Imminent Eclampsia	1	2.3
IUGR	1	2.3
Foetal distress	1	2.3
Post-date + Bad Obstetric History	1	2.3

Table III. Indications of Second Caesarean Section (n=43)

dergo emergency surgery. The causes of the neonatal deaths were congenital abnormality, prematurity and birth asphyxia (Table VI).

Table V. Birth Asphyxia requiring Neonatal ICU admission (n=28)

Indication of Caesarean section	Neonatal Asphyxia No. (%)
Foetal	7 (25.0)
Non-progress due to Malposition	4 (14.0)
Obstructed labour	3 (11.0)
Abruptio placentae	2 (7.0)
Malpresentation	2 (7.0)
In-utero growth restriction	2 (7.0)
Impending rupture	2 (7.0)
Eclampsia	1 (3.6)
Uncontrolled PIH	1 (3.6)
Chorioamnionitis	1 (3.6)
Placenta praevia	1 (3.6)
Cephalo-pelvic disproportion	1 (3.6)
Cervical dystocia	1 (3.6)

DISCUSSION

Lyari General Hospital is located in the peri-urban area of Karachi and caters for patients from near vicinity as well as the adjacent areas of Balochistan province. This population comprises mainly of the labour class, which is under privileged, illiterate and poor. This is reflected in the study results, which reveal that 56% cases were non-booked, 96.5% had co-morbid conditions, 10.9% presented with antepartum hemorrhage, 8.4% were in advanced obstructed labour and 25% had abnormal foetal heart rate patterns at the time of admission. Our Caesarean section rate of 22.3% is comparable to that of another local study from Quetta (21.3%)¹², and those of China (19.4%)¹³ and the United States (19-28%)¹⁴.

All sections, except one, were lower segment operations. The lone classical section was done due to extensive and dense adhesions in the lower uterine segment from the previous Caesarean section rendering access impossible. This is an acceptable indication for classical Caesarean section, as recommended by Patterson et al¹⁵.

The indications for primary Caesarean section in this study were similar to those of other series i.e. dystocia, malpresentations and foetal distress^{2,13,16}. The indications for section were dystocia, placenta praevia and breech presentation in the Quetta study¹²; in USA dystocia alone accounts for 1/3rd of all C-sections¹⁷. In 42% of our cases there was a past history of one or more Caesarean sections; 63% of these second sections were done for non-recurring cause. It appears that avoiding and reducing primary Caesarean section rate should be the principal aim to reduce subsequent operations. Previous Caesarean section is one of the principal indication for performing a repeat section in many studies^{17,18}. In the

Quetta study¹², the frequency of repeat Caesarean section was 15.57%.

Maternal morbidity was seen in 10.3% cases in this study as compared to 14.5% reported by Yousuf and Baloch¹². The average blood loss and blood transfusion requirements were minimum. None of the patients suffered from any life threatening complication. Two patients required Caesarean hysterectomy; one patient had a placenta accreta while the other had a Couvellaire uterus. Both had uneventful post-operative recovery.

The perinatal mortality rate in this study was 47.6/1000 births which is better than that quoted by Yousuf and Baloch¹² i.e. 107/1000 births. It is note-worthy that the maternal and perinatal morbidity, as well perinatal mortality was seen only in non-booked cases, who reported in emergency. The fact that women who had perinatal deaths reported with overt obstetric complications highlights that these deaths could have been avoided if these women had appropriate antenatal and intrapartum care and timely referral.

CONCLUSION

Primary Caesarean section should be performed with clear justification. Pregnant women should be educated to seek antenatal care for early identification and management of problems. Unskilled birth attendants should be trained for early referral. This will in turn reduce maternal and perinatal morbidity and mortality.

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Table VI. Perinatal Deaths (n=10), NND=Neonatal Death

No. & Type	Indication of Caesarean Section	Cause of Death
1 Still Birth	Abruptio placentate / couvellaire uterus	Birth asphyxia
2+3 Still Birth	Obstructed labour / twin pregnancy	Birth asphyxia
4 Still Birth	Obstructed labour / transverse lie / hand prolapse	Birth asphyxia
5 Early NND	Abruptio placentae	Congenital abnormality
6 Early NND	Obstructed labour	Birth asphyxia
7 Early NND	Fetal distress	Birth asphyxia
8 Early NND	Antepartum haemorrhage / placenta praevia	Prematurity
9 Early NND	Uncontrolled PIH	Birth asphyxia / prematurity
10 Early NND	Fetal distress	Congenital abnormality

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