AN AUDIT OF CAESAREAN SECTION AND ITS PERINATAL OUTCOME

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SUMMARY

A one year prospective study was performed. In this study total caesarean sections performed during the year were analysed regarding indications and perinatal outcome. Caesarean section rate in the year studied was 19.11%. Of these the maximum number of patients were grand-multigravidae 40.41%. The commonest indication for which caesarean section performed was cephalo-pelvic disproportion: 20.85%. Other common causes were placenta praevia and fetal distress accounting for 16.78% and 16.60% of cases respectively. Perinatal mortality was 235/1000 births. While the highest was when caesarean section was performed for abruptio placentae 636.4/1000. In cases of neglected transverse lie it was 617.0/1000 and was 500/1000 in cases of retained second twin. For different gestational ages it was highest in less than 34 weeks of gestation where it was 48%. Perinatal mortality decreased as the birth weight increased in each gestational age group but was high in post-term macrosomic babies. Perinatal mortality was also found to be high in grand-multigravidae and in low social class patients. Birth asphyxia was the commonest cause for stillbirths, and prematurity for neonatal deaths.

INTRODUCTION

Caesarean section is the delivery, after 28 weeks of gestation, of the fetus, placenta and membranes through an incision in the abdominal wall. In 1981, the consensus report of the National Institute of Child Health Development recommended adoption of the term "Caesarean Birth" instead of Caesarean Section. Caesarean delivery has been known even before the period of written history, but in those days this used to be a postmortem procedure. Talwud which is a codification of Jewish Law and was written in the first few centuries A.D. contains many discussions about abdominal deliveries.

The first documented successful operation on a living woman was performed by Jacob Nuffer, a Swiss sow gelder, on his wife in the year 1500. After about 40 years Christopher Bane from Italy performed an abdominal delivery and in this case the woman survived.

Jean Bebos 1769 is a great name in the history of caesarean section. He was the first who used sutures to control haemorrhage from the uterus. In 1886 Max Sangers also published a report on this subject and he stressed on suturing of uterus and described its benefits.[1]

The incision of uterus in lower uterine segment was suggested in 1786 by an obstetrician named Johnson. Freidrich also suggested the incision but Kehrer in 1882 was the first obstetrician who used to perform low transverse

incision. In this century lower uterine approach was popularised by Becj, kerr and De Lee.[2]

MATERIAL AND METHODS

A one year prospective study was conducted from Ist January to 31st December, 1991 in 'A' Unit of the Department of Obstetrics and Gynaecology, Post Graduate Medical Institute, Lady Reading Hospital Peshawar.

All the cases were assessed and detailed information regarding parity, previous obstetric history, education, socio-economic status and the present pregnancy were recorded. Proper record of operation and its indication was also maintained. The condition of infants at birth was noted. In case of still-births clinical data was analysed to find out the cause of death. Importance of necropsy along with clinical data to find out the cause of still births has been stressed by Lelia M.N.[3] In view of our social circumstances most relatives refuse to have post-mortem examination of their newborn babies. We, therefore, had to rely on patient's, record and clinical examination of the baby.

Babies were followed till the 7th day of their lives to find mortality and morbidity, when needed investigations were performed and help of paediatrician was taken.

RESULTS

Total deliveries in the year studied were 2836. The number of caesarean section performed both elective and emergency was 542. Caesarean Section rate was 19.11%. Of these 62(11.43%) were elective and 480 (88.57%) were emergency.

Of the total patients 116(21.40%) were primigravidae and of these 113 (20.85%) were in labour when operated. Multigravidae were 207 (38.19%) and 100 of them had previous caesarean section. The maximum number of caesarean deliveries were performed in grand multigravidae which was 219 (40.41%). Forty two of these had history of one or more previous caesarean section.

The commonest indication for which caesarean section was performed was cephalopelvic disproportion, accounting for 113(20.85%). Following this were placenta praevia and fetal distress being the indication in 91(16/78%) and 90 (16.60) of cases respectively.

The highest incidence of caesarean section was in age group 20-29 years (33.76%) followed by 35 years age or above group where it was 31%. Incidence of caesarean section was least common in 20 years or less than 20 years age group.

Perinatal mortality rate was 235/1000 births (23.55%). The still-birth rate was 155/1000 births (15.58%). And neonatal mortality rate was 94/1000 live births (7.97%). Still-birth rate was the highest when caesarean section was performed for neglected transverse lie. Abruptio placentae and retained second twin were the other main reasons. Perinatal mortality rate was 36.10% in grand-multiparas as compared to 29.14% in multi and 19.59% in para one.

Early neonatal deaths were maximum in caesarean deliveries performed for placenta praevia. Neonatal mortality was also worrysome in cases with cord accidents and obstructed labours. Neonatal death rate was very high (28%) in patients with gestational age less than 34 weeks.

As was expected the perinatal mortality rate was highest in grand-multigravidae (36.1%). The second

highest rate (19.59%) was in para one. It was equal in nullipara and para four (15.20%). The lowest perinatal mortality rate was in para two i.e. 13.92%.

DISCUSSION

In this study we have noted a high caesarean section rate of 19.11%. Various studies conducted in different parts of the world have shown different rates. T.F. Nielsen et al.[4] Shiono et al[5] Unnigbe J.A. et al[6] and Jose L. Bobadilla et al[7] gave rates of 12.4%, 19%, 12%, and 27% respectively.

Only in the last mentioned report was the rate higher than in our study. The reason for such a high rate might be, that this is the largest tertiary level hospital and complicated cases are badly managed by traditional birth attendants and are then sent here, adding not only to the rate but of perinatal and maternal morbidity.

Perinatal results of our study were quite depressing if we compare these with other studies. Perinatal mortality rate was 235/1000 births (23.5%) in our series. While Green et al[8] reported zero percent perinatal mortality in caesarean section. That cited by O'Driscoll and Foley M.[9] was 18.85%. N. Chaudhuri et al[10] and M. Sood and Kishore Rajourkar[11] reported rates of 15.4% and 8.3% respectively. Mortality rate was highesty in cases of abruptio placentae (63.64%) which was also the main cause (71.4%) of perinatal mortality in the study by M. Sood and Kishore Rajourkar.[11] The second main indication for section with high perintal mortality in the present study was neglected transverse lie with prolonged labour. No such cause has been mentioned by these authors. Cord accidents were the second common most (57.1%) cause for perintal mortality in their study but in this study only for perinatal mortality in 27.27% of the mortality was due to this. Cephalo-pelivic disproportion with prolonged labour was responsible for 21.23% of deaths in our study as compared to 2.1% in their study.

In our study only one caesarean section was performed for eclampsia (included in miscellaneous group). Both mother and the neonate died. However, Bao SH. and Lin J[12] favoured caesarean section for eclampsia whenever it could not be controlled and reported no deaths in a series of 487 cases of pregnancy induced hypertension with 6 eclamptic patients.

The most common cause of neontal death in present series was prematurity followed by birth asphyxia (36.36% and 25%) while in M. Soo[11] study these were septicaemia and prematurity (31.8% and 27.3%). Multiple congenital anomalies accounted for 13.7% early neonatal deaths in his study while in our cases the percentage was 15.91%.

The present study revealed that caesarean section has become an increasingly common form of delivery and its rate was quite high in our department. Caesarean section has never been and can never be an alternative to vaginal delivery because of its high morbidity and mortality compared to vaginal delivery. Morbidity and mortality rates are more after classical caesarean section as compared to lower sigment.[13]

Maternal mortality following Caesarean section is three fold as compared to vaginal delivery even in the best centres.[14] However it has dramatically dropped from nearly 100% in the tate 19th century to less than 1 in 1000. But even then it can never be entirely safe. Chalmer[15] has made the increasing caesarean section rate responsible for the statif materanl mor-

tality rates in United Kingdom in the last decade.

Caesarean section is associated with increased perinatal morbidity specially when performed as a primary procedure i.e. in labour.[16] This may be due to the indication which necessitated it, but iatrogenic prematurity as is sometimes in elective operation is also a responsible factor. Caesarean section has been proved to be associated with higher incidence of respiratory distress syndrome than vaginal birth. M.E Krantz et al[17] reported its incidence of 24.6% after caesarean section as compared to 5.5% after vaginal delivery after 37 weeks of gestation with other factors corrected.

Perinatal mortality is also dependent upon the condition for which it was performed. Type of anaesthesia and anaesthetic agents are also determining factors. Biggs S.G.[18] referred to an Australian study which showed the perinatal mortality for section to be double of that for all births.

In conclusion it is mandatory for obstetricians and pediatricians to review the indication for caesarean section and the cause of perinatal death to find out whether they are avoidable or not, to delineate problem areas so that health care may be tailored accordingly.

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