

THE ROLE OF CAESAREAN SECTION IN CASES OF ANTEPARTUM HAEMORRHAGE (APH)*

By

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SUMMARY

The study has shown that patients with placenta praevia bleeding prior to foetal viability, may be managed expectantly with improved foetal salvage. All patients with viable foetuses should be delivered by caesarean section without regard to the degree of placenta praevia. Patients being treated expectantly should have interval caesarean section when foetal maturity can be documented by gestational age, foetal size or physiologic studies.

In cases of accidental haemorrhage, to reduce maternal and perinatal mortality and morbidity, the patients should report to hospital at the earliest onset of pain and haemorrhage. In the hospital, immediate care should be given by adequate blood transfusion, early detection of complications, prompt induction of labour with watchful foetal monitoring and in selected cases early resort to delivery by caesarean section.

Introduction

In the first quarter of this century the life of a woman with placenta praevia was at grave risk and her unborn child was in even greater jeopardy. At that time, maternal mortality was 10% and perinatal mortality was 40 to 80%. Emphasis was rightly placed on methods of reducing maternal mortality by inducing labour and effecting early delivery. Williams in his textbook (1923), advised that an intra-ovular balloon or Braxton-Hicks version be employed. These methods were usually effective in controlling placental site haemorrhage but increased haemorrhage and shock by

creating lacerations of lower uterine segment and cervix.

A significant contribution to the evolution of the current management of patients with placenta praevia was made by Bill (1927). He advocated liberal use of blood transfusion and urged that caesarean section be performed to reduce maternal trauma and haemorrhage. While maternal mortality fell markedly to nearly 2%, perinatal mortality, though reduced, remained high because of immediate termination of pregnancy regardless of the duration of gestation.

MacAfee, Johnson and Williams (1945 and 1948) demonstrated that in the absence of vaginal examination the risk of haemorrhage, initially, was minimal and that if this examination was deferred pregnancy might be prolonged until a

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more mature infant could be delivered. With the acceptance of this concept of "expectant therapy" and liberal use of caesarean section, perinatal mortality could be reduced to as low as 8%.

Accidental haemorrhage is associated with considerable hazard to the mother and with a high perinatal mortality from anoxia and prematurity. Maternal safety can be assured by adequate blood replacement, detection of hypofibrinogenemia, control of hypertension, early detection and adequate treatment of renal failure and prompt induction of labour, without recourse to caesarean section. However, early resort to caesarean section in selected cases can raise the perinatal survival.

Aims and Objectives

The purpose of the study was to note the scope and application of these newer concepts in management of bleeding of placenta praevia and accidental haemorrhage and to note if caesarean sections did improve maternal and perinatal outcome.

Material and Methods

A prospective study was conducted at N. Wadia Maternity Hospital from March 1986 to August 1986. There were 5223 deliveries. Of these, 30 were cases of placenta praevia (incidence 1 in 175) and 29 were cases of accidental haemorrhage (incidence 1 in 182).

When placenta was found with its margins at internal os or when it partially or totally overlaid the dilating os as documented by ultrasonography, by vaginal examination or inspection at the time of caesarean section, then, such cases were included. Patients with low-lying placenta were excluded.

A diagnosis of accidental haemorrhage was only considered retrospectively when examination of placenta revealed evidence of retroplacental clots.

Patients with APH having managed by caesarean section were studied in greater depth.

Incidence (Table I)

During March 1986 to August 1986, the total number of caesarean section performed were 363 (6.95%). Menon (1969) reported a caesarean section rate of 9.27% and Sikdar and Mitra (1979) reported it as 11.22%.

TABLE I
Incidence of Caesarean Sections (NWMH)—5223 Deliveries

Total No. of C. Sections	363	6.95%
Total No. of APH cases	59	1.13%
C. Sections in APH	39	66.10%
C. Sections in Placenta Praevia	30	100.00%
C. Sections in Acc. Haemorrhage	9	31.03%

In present series, of 59 cases of APH, 39 had caesarean section, a rate of 66.10%. All the 30 cases of placenta praevia had caesarean delivery giving 100% rate. In 1981 annual report of the hospital, rate of caesarean sections in cases of placenta praevia was 91.4%. At National Maternity Hospital, Dublin (1981), such rate was 100%.

Of 29 cases of accidental haemorrhage, caesarean section was performed on 9 cases, a rate of 31.03%; such rate for the hospital in 1981 was 16.6%. At the Dublin hospital, the rate was 45.28% in 1981.

APH contributed to 10.74% of total caesarean sections in the present series. Sulekha Panday, Jain and L. K. Panday

(1985) have reported that APH contributed to 8.66% of caesarean sections.

Indications (Table II)

In placenta praevia, 14 cases had maternal indication for caesarean section. The commonest being excessive bleeding per vagina. In few cases some other obstetric problems such as abnormal presentation cephalo-pelvic disproportion, previous caesarean section contributed in decision making of caesarean section. The main foetal indication in the 4 cases was foetal distress. In 12 cases, both maternal and foetal factors were responsible in this are included those elective caesarean sections done for posteriorly situated placenta praevia.

tive operations. Of 19 cases managed conservatively, 12 had emergency caesarean section while 7 had elective operation.

In accidental haemorrhage, all the 9 cases had emergency caesarean section.

Methods of Caesarean Section

All had lower segment caesarean section (LSCS) except two; one each in placenta praevia and accidental haemorrhage had caesarean hysterectomy for uncontrolled bleeding.

Complications

In placenta praevia, 10 cases had intra-operative bleeding of varying degree, 3

TABLE II
Indications for Caesarean Sections

	Maternal	Foetal	Combined
Placenta Praevia	14 (46.66%)	4 (13.33%)	12 (40.0%)
Acc. Haemorrhage	3 (33.33%)	4 (44.45%)	2 (22.2%)

Of 9 cases of accidental haemorrhage, 3 had maternal indications such as DIC, CPD with previous LSCS and previous LSCS with uterine rupture incidentally, all had fresh still-births. Four cases had foetal distress as indication, while 2 cases had associated placenta praevia with foetal distress.

Type of Caesarean Section (Table III)

In placenta praevia, 21 cases had emergency caesarean section, while 9 had elec-

had hypovolemic shock, 2 cases had cardiac arrest on operating table which were revived and one had severe post-partum anaemia which resulted in periperal septicaemia and subsequent death.

In accidental haemorrhage, one case had DIC which was treated, one had hypovolemic shock and one had uterine rupture.

Blood Transfusions

In placenta praevia, 10 patients received blood transfusions at the time of surgery; the number of units varying from 1 to 9. In accidental haemorrhage, 5 cases needed blood transfusions at surgery; units of blood varying from 1 to 5. Thus, availability of adequate amount of

TABLE III
Type of Caesarean Section

	Emergency	Elective
Placenta Praevia	21 (70.0%)	9 (30.0%)
Acc. Haemorrhage	9 (100%)	Nil

blood and timely transfusions played important role in the management of APH cases.

Type of Anaesthesia

In placenta praevia, 22 cases were administered spinal anaesthesia. Eight cases were given general anaesthesia. In accidental haemorrhage, 5 had spinal and 4 had general anaesthesia. General anaesthesia was used in cases where maternal condition contra-indicated spinal anaesthesia, such as hypovolemic shock. In 2 cases, spinal was supplemented by general anaesthesia.

Period of Gestation (Table IV)

In placenta praevia, 28 cases attained gestational age of 34 weeks and more; majority had reached term. Of 10 cases in which 1st episode of bleeding was around 28 to 30 weeks, 8 cases could be taken upto 34 weeks or more by successful conservative management.

TABLE IV
Weeks of Gestation at Delivery

	Weeks of Gestation		
	28-33	34-36	37 +
Placenta Praevia	2	11	17
Acc. Haemorrhage	2	3	4

Foetal Outcome (Table V)

In placenta praevia, there was no foetal

death in caesarean delivery. However, 4 premature babies died during first week of life due to problems of prematurity. Perinatal loss in placenta praevia undergoing caesarean section was thus 13.34%. This figure is lower than many centers in India, where perinatal mortality ranges from 33 to 62% as quoted in textbook of obstetrics by Menon (1986). A report from Royal Hospital, Belfast (1963-67), showed a perinatal loss of 8.8%. Neonatal morbidity in 26 surviving babies was noted in 9 of them (34.6%). The problems were birth asphyxia, anaemia, neonatal jaundice and infection; all babies recovered satisfactorily.

In accidental haemorrhage, the perinatal mortality amongst caesarean section was 3 out of 9 (33.3%). These three had caesarean section for maternal indication. All the cases of accidental haemorrhage, delivered vaginally during the same period, had intra-uterine death giving 100% mortality. All these were late admissions and nothing could be done to salvage them. The overall perinatal mortality amongst 29 cases of accidental haemorrhage was 79.31%. Naidu *et al* (1961) and Das (1961) have shown perinatal mortality in accidental haemorrhage to be varying from 59-82%. Out of 6 live-borns in accidental haemorrhage undergoing caesarean section, 3 had asphyxia coupled with prematurity, ultimately recovering.

TABLE V
Foetal Outcome in Caesarean Sections for APH

	Live-born (Term)	Live-born (Preterm)	FSB*	MSB**
Placenta	17	13	nil	nil
Acc. Haemorrhage	3	3	2	1

* Fresh Still Born. **Macerated Still Born.

Maternal Mortality

Only one case of placenta praevia of the 59 cases of APH died following inadequate replacement of blood and subsequent anaemia which led to purpura septicaemia, giving incidence of 1.69%. Menon (1986) has quoted higher figures (2.1 to 6.4%) of maternal mortality in APH from other parts of India.

Discussion

Though maternal mortality has reduced with modern management of APH, perinatal mortality remains high. If the latter is to be reduced, viable foetuses must be carried to viability, premature babies must receive optimal neonatal care and the live birth of mature foetuses must be assured.

The single-most important factor in reducing perinatal mortality and maternal mortality has been the increase in caesarean births. There is almost no indication for vaginal delivery in patients with placenta praevia whose babies have attained viable age with fairly good maturity (34 weeks or more).

Since in this study, so many caesarean sections were emergency procedures due to severe haemorrhage, it might be possible to consider elective caesarean a little earlier in pregnancy to reduce maternal morbidity of haemorrhage, shock and massive blood replacement. This approach might also prevent intrauterine hypoxia or death which might occur during expectant management. This will be possible only when the neonatal services are geared up better to handle premature babies.

The perinatal mortality in accidental haemorrhage has remained high for a large number of foetuses due in utero prior to admission. The factors adversely

affecting perinatal outcome are prematurity, maternal hypertension and sudden extension of concealed haemorrhage. Sometimes babies die in utero suddenly without any warning. The prolonged labour is detrimental to the foetus. Therefore, a policy of intensive foetal monitoring and readiness to do a timely caesarean section, where babies have fair chances of survival outside, can raise prospects of infant survival.

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