

A 5 Year Review of Severe Abruptio Placentae

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OBJECTIVE - To evaluate the clinical profiles and maternal outcomes in cases of severe abruptio placentae. **METHODS** - Retrospective analysis of severe abruptio placentae cases from hospital records over a span of five years (June, 1988 - 1993) was done. Study included all cases of abruptio severe enough to kill the fetus (180 subjects) and 1 case with live birth which resulted in maternal death. Clinical features, complications and maternal mortality were evaluated. **RESULTS** - Incidence of severe abruptio was 1 in 215 deliveries, being higher with increased age and parity. Maternal mortality was 9.9%, one third of it being antepartum, occurring shortly after admission. 33% of all hospital still births resulted from abruptio, 71% of them being fresh. Thirty percent of cases were < 36 weeks with higher incidence of IUGR; hypertension was more common, especially in fatal cases. More than one third of the patients had hypertension whose incidence was still higher in fatal cases. Forty six (24%) patients initially presented with no evidence of external bleeding. **CONCLUSION** - Abruptio-placentae remains an important cause of still births and maternal mortality.

Key words : severe abruptio placentae, still-birth, maternal mortality

Introduction

Abruptio placentae is bleeding following premature separation of the normally situated placenta. It is a death threat to the fetus and is also a danger to maternal life. The incidence varies from 0.49 to 1.8%. The wide variation is due to inconsistency in diagnostic criteria. However, one well defined category of major clinical importance is definitely identifiable - placental separation severe enough to kill the fetus in utero. We restricted our study to this category. The aim of the study is to critically evaluate the clinical profile and maternal outcome.

Material and Methods

Over a span of five years (June 1988 to June 1993) 38,870 deliveries took place at Eden hospital, Medical College, Calcutta and 181 cases of severe abruptio-placentae occurred. These cases were severe enough to kill either the fetus or the mother or both. Of the 181 cases of severe abruptio, 180 deliveries ended in still births. Only one case where a live baby was delivered by caesarean section with mother dying post partum was included in severe category of abruptio.

Results

One hundred and eighty one severe cases in 38,870

deliveries gave an incidence of severe abruptio of 1 in 215 amongst all hospital deliveries. Eighteen maternal deaths in 181 cases resulted in a maternal mortality rate of 9.9%. Twelve patients died in postpartum period. Six patients died undelivered, all within six hours of admission. Four of the fatal cases had IUCS, one of them being a caesarean hysterectomy. Overall 46 (25.8%) of the 181 cases were delivered by caesarean section.

Abruptio also accounted for 7.3% of all stillbirths in our hospital. Of the 180 stillbirths 128 (71%) were fresh and 52 (29%) were macerated.

Table-I shows the age and parity distribution of the patients. The incidence of abruptio placentae increases with advanced age and parity. Significantly 50% of the fatal cases occurred in the above 30 age group.

Table II shows the duration of gestation and birth weights. Total number of cases between 28 - 32 weeks, 33 - 36 weeks and beyond 36 weeks were almost evenly distributed. Only 17% of the term babies weighed more than 2.5 Kg. Gestational age could not be ascertained in 77 cases.

Associated factors in our cases included hypertension (BP > 140/90 mm of Hg) in 63 cases (34.8%), prelabour rupture of membrane in nine cases (4.9%), history of blunt trauma four cases (2.2%) and hydramnios two cases (1.1%).

Table III depicts the various complications encountered; every complication was more frequent in the 18 fatal

Paper received on 12.2.2003 accepted on 18.6.03

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Table I : Age and Parity Distribution

Age in Year	Number of abruptio		Overall in per cent	Parity hospital	Number of abruptio		Overall hospital deliveries in per cent
	Patient alive	Fatal cases			Patient alive	Fatal cases	
< 20	11 (6.7%)	2 (11.1%)	25	P ₀	46 (28.2%)	6 (33.3%)	48.0
20-30	114 (69.9%)	7 (38.9%)	63	P ₁₋₄	89 (54.6%)	9 (50%)	47.0
> 30	38 (23.4%)	9 (50.0%)	12	> P ₄	28 (17.2%)	3 (16.7%)	5.0

Table II : Duration of Gestation and Birth Weight

Duration of Gestation	Number of Cases	Birth Weight	Number of Cases
< 28 weeks	8 (7.7%)	< 1.5 kg	34 (18.8%)
28 - 32 weeks	31 (29.8%)	1.5 to 2 kg	73 (40.33%)
33 - 36 weeks	33 (31.73%)	> 2 kg to 2.5 kg	43 (23.76%)
> 36 weeks	32 (30.7%)	>2.5 kg	31 (17.1%)

Table III : Complications

Complications	Amongst the Surviving Mothers (n = 162)	Amongst the Fatal Cases (n = 18)
Shock on admission	14 (8.64%)	3 (16.66%)
Acute renal failure	1 (0.62%)	3 (16.66%)
Clinical coagulation failure	16 (9.88%)	10 (55.56%)
Postpartum haemorrhage	18 (11.11%)	5 (27.78%)

Table IV : Initial Atypical Presentation

Initial Atypical Presentation	Number of Cases	Percent
Absence of bleeding per vagina	46	25.40
Pain in abdomen/ labour pain	18	9.9
Hypertension (including 5 cases of eclampsia)	10	5.5
Loss of fetal movement	4	2.2
Dribbling per vagina	4	2.2
Trauma	1	0.55
Combination of above symptoms	12	6.6

cases. Clinically overt coagulation failure in ten (55.56%), hypertension in eight (44.44%) and postpartum haemorrhage in five (27.78%) were the leading complications in the fatal cases. All cases developing acute renal failure had co-existent hypertension.

Table IV shows the typical initial presentations. In 46 (24.30%) cases there was no external vaginal bleeding on admission. Eighteen (9.9%) patients initially presented with pain in abdomen and/or labour pain only. Hypertension (including 5 eclampsia cases) alone was the initial presentation in 10 cases (5.5%).

Loss of fetal movements was the initial presenting feature in four (2.2%) patients and dribbling per vagina in four (2.2%).

Discussion

The frequency of abruptio-placentae so severe as to kill the fetus decreased from 1 in 420 deliveries (from 1955-59) to 1 in 830 deliveries (1974 to 1989) at Park Land hospital, USA.

Our series registered an incidence of 1 severe case in 215 deliveries. The frequency depends on how quickly the women seek and receive care following the onset of symptoms. The late arrival of patients to our hospitals is responsible for the higher incidence. Abruptio is an important cause of perinatal mortality and in our series and accounted for 7.3% of all still births. As deaths from other causes have decreased in Western countries those from abruptio-placentae have become prominent accounting for 12-15% of still births¹.

The incidence of abruptio placentae increases with advanced age and parity. Our findings showed the same trend. Moreover case fatality was higher in advanced age group.

In about half of all cases, abruptio occurs after 36 weeks. In our series, however, 30.7% of cases occurred beyond 36 weeks. Only 17% of the term babies weighed more than 2.5 kg showing that IUGR was prevalent amongst the stillbirths. Naeye et al² also found high incidence of IUGR in cases of abruptio with perinatal mortality. It could be speculated that the common thread which runs through severe abruptio and increased incidence of hypertension, IUGR and preterm labour could be due to a common primary placental trigger.

Hypertensive disorder during pregnancy has accounted for a relatively high incidence of all cases of abruptio placentae. Presence of hypertension can treble the fetal mortality from abruptio. In our series

more than one-third of patients had hypertension. Significantly in fatal cases of abruptio, the incidence of hypertension was still higher (44%). Rai and Kumar reported an even higher incidence of 58.2% of hypertension in their series.

The incidence of abdominal trauma, prelabour rupture of membrane and hydramnios accounted for only a few cases.

Signs and symptoms with abruptio placentae can vary considerably. Vaginal bleeding (78%), pain in abdomen and tenderness (66%) and fetal distress (60%) were the commonest presentation in one series. In our series 46 (25.4%) patients initially presented with no evidence of external bleeding. Pain in abdomen and/or labour pain (9.9%) was the commonest presentation amongst the patients who did not have vaginal bleeding. Hypertension alone seen in 10 cases (5.5%), including 5 eclampsia cases, was another important presenting feature in this group.

Four patients (2.2%) presented with loss of fetal movements. Of the 180 still births, in 164 (90.6%) fetal heart sounds were absent on admission. Rai and Kumar reported intra-uterine fetal deaths on admission in 50% cases.

Fresh still-births constituted 71% while macerated still-birth occurred in 29% cases in our series. The most common perinatal death in abruptio placentae is fresh still-birth. Ingle and Mehta reported almost one-fourth of still-births as macerated, similar to our findings.

Maternal death due to abruptio placentae still occurs in the developing country, incidence being 3%. In our series dealing with severe cases maternal mortality was 9.94%. Of our 18 maternal deathss six occurred before delivery, all within six hours of admission.

There were higher incidences of shock on admission, hypertension, cesarean section, acute renal failure, coagulation failure and postpartum haemorrhage in the fatal cases.

The overall cesarean section rate of 8.8% was not higher because our series dealt with severe abruptio resulting in still-births. Majority of the operations were done as a desperate attempt to save the mother and hence the higher incidence of cesarean section.

Abruptio-placentae continues to exact a heavy toll of both fetal and maternal lives in developing countries. It is neither preventable nor predictable in majority of the cases. In developed countries maternal and fetal outcomes have improved due to early arrival

of the patients, timely interventions, liberal blood transfusion and excellent neonatal care. But the developing countries still have a long way to go to achieve similar figures.

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