

ACCIDENTAL HAEMORRHAGE *

by

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Accidental haemorrhage, or abruption placentae, signifies a premature separation, i.e. before the onset of the third stage of labour, of normally situated placenta, whatever be the cause of such separation. Once the condition sets up, it is usually progressive, more and more area of the placenta getting separated as time passes on. By its very nature the condition is extremely hazardous to the existence of the foetus in utero, depriving it of its very source of life. But even the great foetal hazards do not minimize the dangers to the mother that lie in shock, hypofibrinogenaemia and renal failure. The seriousness of the condition and its progressive nature demand a great alertness on the part of the obstetrician in treating it promptly.

Incidence

From 1st Jan. 1959 to 31st Aug. 1960 there were 17213 confinements at the Nowrosjee Wadia Maternity Hospital. During this period there were 190 cases of accidental haemorrhage. This gives an incidence of 1:90 confinements. Table I gives the incidence reported by other writers. The incidence will vary from place to place depending on the effective

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antenatal care received by the patients and the incidence of toxæmia of pregnancy.

TABLE I
Incidence

Author	Incidence
Hester & Salley	1 : 74
Waddington	1 : 104
Porter	1 : 192
Dyer & McCaughey	1 : 180
Present Series	1 : 90

Age

Table II gives the age distribution in our series. Greatest number of cases lie in the age group 26-30 years, this being the period of maximum fertility. Dyer and McCaughey report the greatest number of cases in the age group 21-30 years.

TABLE II
Age Distribution

Age in years	No. of cases
16-20	20
21-25	47
26-30	71
31-35	44
36-40	8
Total	190

Parity

Table III gives the parity distribution in our series. The cases seem to

be nearly equally divided in all the different parities.

TABLE III
Parity Distribution

Parity	No. of cases
I	22
II	21
III	13
IV	34
V	21
VI	27
VII	24
VIII & more	28
Total	190

Table IV compares the parity distribution in this series with the parity distribution of the hospital patients at large. It can be seen that the incidence of accidental haemorrhage is least amongst primiparae and that it rises as parity increases, markedly so after parity V.

TABLE IV
Parity Distribution compared to Hospital Patients

Parity	Acci. haem.	Hospital patients (based on 5,000 confinements)
I	11.6 %	21.1 %
II to V	46.8 %	62.9 %
VI & above	41.6 %	16.0 %

Gestational Age

Table V gives period of gestation at the time of the occurrence of accidental haemorrhage in the present series. The greatest number of cases is between 39-40 weeks. Waddington's experience is also similar.

Antenatal care

Out of the 190 cases, 111, 58.4 %, were emergency cases who received

TABLE V
Period of Gestation

Period of gestation in weeks	No. of cases
28 - 30	35
31 - 32	14
33 - 34	10
35 - 36	26
37 - 38	18
39 - 40	87
Total	190

no antenatal care and 79, 41.6 %, were booked cases. The preponderance of emergency cases needs no comment. However, it must be emphasized that 40 out of the 79 booked cases paid merely one or two visits for the antenatal check-up, most of these before the last month of pregnancy. In short, half of the booked cases did not properly avail themselves of the antenatal care offered and frustrated the whole purpose of registering themselves at the hospital for confinement.

Toxaemia of Pregnancy

Presence of any two of the three cardinal signs, viz. high blood pressure (systolic above 130 mm. Hg or diastolic above 90 mm. Hg.), oedema and albuminuria, was taken as diagnostic of a toxaemic pregnancy. Out of the 190 cases, 60 were toxaemic. This gives an incidence of toxaemia of 31.6 %, an incidence far greater than that observed in the hospital patients in general. Hester and Salley report 45% incidence of toxaemia in their series of accidental haemorrhage. Waddington reports a 16.5 % incidence of toxaemia in accidental haemorrhage, which is three times the incidence of 5.5 % toxaemia at his hospital. The role of toxaemia of pregnancy in the etiology

of accidental haemorrhage seems unquestionable.

Etiology

The role of parity, antenatal care and toxæmia of pregnancy is already referred to. It seems that proper antenatal care will reduce the incidence of toxæmia of pregnancy and the occurrence of accidental haemorrhage. However, it must be emphasized that in 130 or 68.4 % of our cases there was no toxæmia. In 5 of these trauma was an etiological factor. In all of these 5 cases, direct trauma to the abdomen in the form of a kick, blow or fall immediately proceeded the onset of accidental haemorrhage in an otherwise normal pregnancy. In 4 other cases a short cord was thought to be responsible for the accidental haemorrhage. In all these 4 cases accidental haemorrhage set in during the second stage of labour. In 2 cases of hydramnios, sudden spontaneous rupture of membranes was soon followed by the onset of accidental haemorrhage. In our series of 190 cases, in 119 cases no etiological factor could be detected. Much work needs to be done as far as the etiology of accidental haemorrhage is concerned.

TABLE VI
Etiology

Etiological factor	No. of cases
Toxaemia	60
Trauma	5
Short Cord	4
Hydramnios & sudden rupture of membranes	2
Unknown	119
Total	190

Clinical Diagnosis

The diagnosis of revealed accidental haemorrhage is usually arrived at by the exclusion of other causes of antepartum haemorrhage. In general, the presence of toxæmia of pregnancy favours the diagnosis of accidental haemorrhage.

The diagnosis of concealed accidental haemorrhage is based on the gradual development of a well known clinical syndrome of tense and tender uterus, inability to palpate the foetal parts and the disappearance of foetal heart sounds. Table VII gives the clinical features seen in the present series. We came across 40 cases of pure concealed accidental haemorrhage without any revealed bleeding.

TABLE VII
Clinical Features

Clinical features	No. of cases
Vaginal bleeding	150
Toxaemia	60
Tense uterus	56
Tender uterus	25
Inability to palpate foetal parts	26
F.H.S. absent on admission	101
F.H.S. disappearance after admission	43

Management

The management of accidental haemorrhage at our hospital is essentially conservative, an abdominal delivery being rarely resorted to. The preliminary management consists in the efficient treatment of shock. Blood transfusions are freely administered as necessary. In the present series, 53 cases, 28%, required blood transfusions. Out of those 53 cases, 23 needed 350 c.c. of blood, 19 needed 700 c.c. of blood and only 11 needed

1050 c.c. or more of blood. 3850 c.c. was the maximum amount of blood given to a single patient.

After the diagnosis of accidental haemorrhage was arrived at, the patients were kept under a careful watch while spontaneous labour was awaited. If the bleeding, either revealed or concealed, persisted, an artificial rupture of membranes was promptly resorted to. This was necessary in 87 cases and in 66 of these no further treatment was required. Rupture of membranes, spontaneous or artificial, hastens the delivery and helps quicker emptying of the uterus, which is the essence of the management of accidental haemorrhage. Rupture of membranes also decreases the intra-uterine pressure and hence minimises the danger of hypofibrinogenaemia from thromboplastin absorption. If after rupture of membranes the progress of the condition is arrested or if the uterine contractions are poor we resort to oxytocics in the form of an intravenous pitocin drip administration. In this series pitocin drip was required in only 21 cases. In cases of accidental haemorrhage pitocin drip should not be given before the rupture of membranes for fear of hypo-fibrinogenaemia resulting from the increased intra-uterine pressure. We have repeatedly noted that in cases of accidental haemorrhage the uterus does not respond to the administration of normal amounts of pitocin. According to our present practice, the pitocin drip given to cases of accidental haemorrhage contains 0.03 to 0.04 units of pitocin per c.c. instead of the usual amount of 0.01 units. In certain cases this concentration is required to be further

increased before the uterus responds to it and pains start. We have safely given pitocin drips with concentrations of 0.06 units per c.c. to cases of accidental haemorrhage during labour. It is difficult to explain the lack of response of the uterus to normal amounts of pitocin in cases of accidental haemorrhage. Possibly, the premature separation of placenta and the resulting retroplacental clot lead to the release of pitocinase, the absorption of which results in the rapid destruction of circulating pitocin, both natural and administered, and hence the uterine inertia and the lack of response to administered pitocin.

The main aim in the management of accidental haemorrhage is to effect an emptying of the uterus which alone is a guarantee against further separation of the placenta. When active treatment was necessary to effect a quick evacuation of the uterus we found that artificial rupture of membranes with pitocin drip, if required, was very effective even when the cervix was not favourable or ripe, and even in primiparae.

We use caesarean section very rarely in cases of accidental haemorrhage. Foetal chances are very poor and hence we usually compromise the foetal chances in favour of vaginal delivery. We use caesarean section only for maternal indication. If the patient's condition warrants immediate evacuation of the uterus or if the uterus does not respond to oxytocics while the patient's condition is worsening, then only we resort to caesarean section. In this series caesarean section was required on only 4 occasions.

TABLE VIII
Treatment

Treatment	No. of cases
Nil active	99
A. R. M.	66
A. R. M. + I. V. pitocin drip	21
L. S. C. S.	4
Total	190

Complications

In the present series 12 patients had post-partum haemorrhage, one of whom expired. Clinical picture of hypo-fibrinogenaemia developed in 4 cases in the present series. In all of them the hypo-fibrinogenaemia was successfully combated by giving triple or quadruple plasma.

Maternal Mortality

There were 4 maternal deaths in the series. The maternal mortality rate, thus, is 2.1%. One patient had severe uncontrollable post-partum haemorrhage and died 4 hours after delivery as a result of it. One patient died of cardiac failure due to severe anaemia on the 7th day after delivery. Two patients died undelivered, one of whom could probably have been saved by a timely caesarean section.

Foetal Salvage

In the present series there were 144 stillbirths and 13 neonatal deaths and thus the perinatal mortality is 82.6%. There were 46 live-births among the 190 babies, a gross live-birth rate of 24.2%. But in 101 cases the foetal heart sounds were absent on admission. Out of the 89 cases in whom the foetal heart sounds were present on admission, there were 46 or 51.7%

live-births. Among the 60 toxæmic cases there were 11 or 18.3% live-births whereas among the 130 non-toxæmic cases there were 35 or 27% live-births. 142 babies weighed less than 5 lbs. at birth and among them there were 28 or 20% live-births. Out of the 48 babies who weighed more than 5 lbs. at birth, 18 or 37.5% were live-born. The live-birth rate in mild cases was 34.1% (29 live-births among 85 cases). In moderate cases it was 21% (16 live-births out of 76 cases) and in severe cases it was 3.4% (1 live-birth out of 29 cases). Out of the 46 live-born babies, 13 expired in the first week after birth. Only 2 of these 13 had a birth weight of more than 5 lbs. The foetal salvage is a complex problem involving the role of prematurity, toxæmia of pregnancy and severity of accidental haemorrhage, all of which weigh heavily against the foetus.

Comments

Accidental haemorrhage is one of the most serious complications met with in obstetrics and demands prompt management. We advocate conservative management and only rarely resort to abdominal delivery. We feel that artificial rupture of membranes and pitocin drip are adequate weapons in the management of most of the cases. Maternal mortality rate in the present series is 2.1% and in only 1 out of the 4 cases the mother's life could probably have been saved by a timely caesarean section. The perinatal mortality of 82.6% in the present series may sound very high. But as has been pointed out when the foetal heart sounds were present on admission 51.7% of the babies were live-born. Apart from anything else,

prematurity seems to be the greatest factor weighing against the foetus, for, in our series, 142 babies out of 190, 77%, weighed less than 5 lbs. at birth. Again, prematurity was solely responsible for 11 out of 13 neonatal deaths in the series. Under the circumstances, we feel that caesarean section, to improve foetal salvage, has not much of a place in the management of accidental haemorrhage.

References

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