AN ANALYSIS OF 315 CASES OF ADHERENT AND RETAINED PLACENTA AT WOMEN AND CHILDREN HOSPITAL, EGMORE, MADRAS

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In this paper is presented an analysis of 315 cases of retained and adherent placenta which occurred among 45,624 deliveries during the years 1950-1954. The incidence of this complication of the third stage of labour was 0.69 per cent. An attempt has been made to analyse the cases with regard to the incidence, causation, treatment and results.

It has been found that, as shown in Table II, the maximum incidence is among primiparae, being 32.2 per cent, with a gradual diminution with increasing parity.

TABLE I

Incidence

Year	Total deliveries	No. of cases
1950	8,713	68
1951	8,688	59
1952	9,737	51
1953	8,901	49
1954	9,585	88
Total	45,624	315
Percentage		0.69

TABLE II

Parity

Year	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XI Labour
1950 ..	.. 26	12	7	11	5	1	2	2	1	1	—	—
1951 ..	.. 19	15	6	4	1	4	2	2	5	—	—	1
1952 ..	.. 13	10	10	5	3	4	2	2	1	—	1	—
1953 ..	.. 14	3	8	5	4	2	5	4	1	1	2	—
1954 ..	.. 29	7	8	10	6	9	4	7	5	2	—	1
Total	..101	47	39	35	19	20	15	17	13	4	3	2
Percentage	..32.2	15.1	12.3	11.2	6	6.3	4.7	5.3	4.1	1.3	.9	.6

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From parity I to VI, the percentage of incidence was 83.1 and from VII to XII 16.9.

The highest incidence is in women between the ages of 20 and 30, perhaps because of the maximum number of pregnancies occurring during this age period. From an analysis of 15,000 deliveries in the hospital, it has been found that 62.4 per cent of the deliveries were among women of this age period.

TABLE III

Age

Year	Below 20	20-24	25-29	30-34	35-39	40 and above
1950	13	18	18	13	6	—
1951	9	23	7	6	10	4
1952	3	11	21	9	7	—
1953	8	10	13	9	9	—
1954	8	27	12	23	15	3
Total ..	41	89	71	60	47	7
Percentage ..	13	28	23	19	15	2

The majority of deliveries were at term being 59 per cent, as shown by Table IV.

The maximum number of deliveries was natural (Table. V) with a percentage of 69.2, while forceps deliveries were 23.8%.

Of these, 37 per cent delivered outside the hospital either in their homes or in maternity centres.

It has been difficult to determine the relationship of the duration of labour to the incidence of the complication. 116 of the cases delivered outside the hospital and the duration of labour was not known in these cases. Of the cases where the duration of labour is known, Table VI shows that 16% of the deliveries were in the 4-8 hours group and 14% in the 8-12 hours group.

TABL IV

Maturity in Weeks

Year	28	30	32	34	36	38	40	Not known
1950 ..	2	2	11	6	2	4	38	3
1951 ..	2	3	4	2	7	1	39	1
1952 ..	2	2	5	3	1	1	34	3
1953 ..	3	3	4	7	6	1	25	—
1954 ..	5	5	7	6	7	2	51	5
Total ..	14	15	31	24	23	9	187	12
Percentage ..	4	5	10	8	8	2.5	59	3.5

TABLE V

Mode of Delivery

Year	Natural	Breech	Forceps	Version	Delivered outside Hospital.
1950 ..	40	2	23	3	27
1951 ..	40	—	19	—	22
1952 ..	38	6	7	—	23
1953 ..	40	4	5	—	15
1954 ..	60	7	21	—	29
Total ..	218	19	75	3	116
Percentage	69.2	6.0	23.8	1.0	37.0

TABLE VI

Duration of Labour in Hours

Year	Below 4 hours	4-8	8-12	12-16	16-20	20-24	24 and over	Not known
1950 ..	0	7	8	9	6	4	7	27
1951 ..	2	12	8	10	4	—	4	19
1952 ..	1	11	8	7	—	2	—	22
1953 ..	9	7	8	3	4	1	2	15
1954 ..	6	14	11	5	8	3	11	30
Total ..	18	51	43	34	22	10	24	113
Percentage ..	6	16	14	11	7	3	7	36

There were 7 per cent of cases who had a labour of over 24 hours. No conclusions could be drawn from this regarding the relationship of the duration of labour to the occurrence of this complication of the third stage of labour. In this series, 58 per cent of the placentae were adherent and 42 per cent retained. There were morbid adhesions in 4.4 per cent and the placenta had to be removed piecemeal in 3 cases. In no case was there need to abandon the manual removal, as in none of them was the placenta accreta.

The common placental abnormalities seen were, accessory lobes of the placenta in 3 cases, abnormally large placenta in one, membranaceous placenta in 4 and placenta praevia in 4. A fairly large number of placentae had infarcts and fibrosis of varying degree.

TABLE VII

Complications: Whether Retained or Adherent

Year	Adherent	Retained
1950 ..	29	39
1951 ..	27	32
1952 ..	32	19
1953 ..	34	15
1954 ..	62	26
Total ..	184	131
Percentage ..	58	42

TABLE VIII

Placental Abnormalities

Bilobed placenta	1
Succenturiate placenta ..	2
Abnormally large placenta ..	1
Membranaceous placenta ..	4
Placenta praevia	4

The placenta was retained in 52 per cent of the cases. Out of the 315 cases, 7 had developed an hour-glass constriction and the placenta was retained as a result of that. In 6 cases the hour-glass constriction was due to the administration of ergometrine intravenously. During the last two years under survey, routine administration of intravenous ergometrine had been practised. The ergometrine was given in all operative deliveries, especially forceps deliveries, as the shoulders of the baby were being delivered. In the majority of cases, the placenta separated in 3-5 minutes. If the placenta was not expressed in 5-10 minutes, a manual removal of the placenta was done. In this series, only in 1.9 per cent of the cases the placenta was retained as a result of hour-glass constriction following the administration of ergometrine.

The incidence of post-partum haemorrhage associated with a retained or adherent placenta has been studied and found to be 68 per cent as shown in Table IX. The severity of the haemorrhage has also been graded as mild in 49 per cent, moderate in 40 per cent, and severe in 11 per cent. The actual blood loss has not been measured, but an approximate estimate has been made and severity decided upon by the effect the blood loss has had on the individual.

TABLE IX

Incidence of Degree of P.P.H.

Year	No. of cases of P.P.H.	Mild	Moderate	Severe
1950	50	28	20	2
1951	41	18	18	5
1952	24	17	5	2
1953	42	25	10	7
1954	57	18	31	8
Total	214	106	84	24
Percentage	68	49	40	11

The complication of a retained placenta is often associated with shock in addition to the haemorrhagic collapse, perhaps because of the frequent attempts made at expression of the placenta. The incidence of shock was 46 per cent. The severity of the shock as judged by the increase in pulse rate and drop in blood pressure was mild in 31 per cent, moderate in 53 per cent and severe in 16 per cent.

TABLE X

Incidence of Shock and Severity

Year	No. of cases with shock	Mild	Moderate	Severe
1950	30	9	15	6
1951	22	7	12	3
1952	17	4	11	2
1953	30	12	14	4
1954	45	13	25	7
Total	144	45	77	22
Percentage	46	31	53	16

Treatment

The routine treatment followed during the five years under survey has been as follows:

In cases of retention of placenta without any shock or haemorrhage, after an interval of half an hour, an attempt is made to express the placenta by Crede's method, once without an anaesthetic and once under anaesthetic. If the placenta has not separated, a manual removal is performed. In some cases, an intravenous injection of 25 mgms. of ergometrine is given just before the attempt by Crede's method is made. If the Crede's manoeuvre fails, immediate manual removal is done. If the condition is complicated by shock, the patient is treated with blood transfusion, glucose saline injections and cardiac stimulants and drugs to restore the blood pressure.

In this series of cases, 70 per cent of the cases had a manual removal, 24 per cent had Crede's expression done and in 6 per cent interference as regards the placenta was not possible, as the condition of the patient did not allow it.

Blood transfusion or glucose saline infusions were given in 48 per cent of cases in order to treat the shock.

TABLE XI

Mode of Treatment

Year	Manual removal of placenta	Crede's expression	No interference	Where Crede's failed
1950	44	18	5	—
1951	43	21	10	4
1952	39	12	1	4
1953	40	7	2	2
1954	78	9	1	9
Total	244	67	19	19
Percentage	74	20	6	—

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Results

In forty per cent of cases the puerperium was morbid. All of them belonged to the group where a manual removal of the placenta was done, thus showing that introduction of the hand into the uterine cavity to remove the placenta does carry a definite morbidity with it. In one case death occurred as a result of peritonitis 3 days after delivery. The patient was admitted with intrapartum sepsis.

TABLE XII

Morbidity and Mortality

Year	Febrile puerperium	Maternal death
1950	24	6
1951	32	5
1952	24	3
1953	15	4
1954	25	5
Total	120	23
Percentage	40	7.3

Details of Maternal Deaths

1950 — 6 deaths

1. Shock and P. P. H. due to retained placenta and anaemia
2. Shock and P. P. H. due to retained placenta
3. Shock due to retained placenta and anaemia
4. Pulmonary embolism
5. Small pox in puerperium
6. Shock

1951—5 deaths

3 patients were brought in a moribund condition and died with the placenta in utero.

4th—adherent placenta, manual removal done, shock and P.P.H.
5th—adherent placenta, manual removal, shock.

1952 — 3 deaths

1. Peritonitis, died on the 3rd day.
2. Patient admitted in moribund condition.
   Shock due to retained placenta. Patient died with placenta in utero.
3. Shock after manual removal of adherent placenta.
   Patient died 12 hours after manual removal.

1953 — *4 deaths.*

1. Shock and P.P.H.
2. Shock due to retained placenta utero.
3. Shock and P.P.H.
4. Severe megaloblastic anaemia and shock.

1954—*5 deaths.*

1. Anaemic patient. Partially adherent placenta—Manual removal—Cause of death, Pulmonary oedema.
2. Partially adherent placenta—an attempt at manual removal was done outside, resulted in the snapping of the cord. Patient had severe P.P.H.
3. Admitted in a collapsed state, revived with transfusions and then manual removal done. Later, patient collapsed again and died.
4. Patient admitted in a moribund condition and died with placenta in utero.
5. Toxaemic patient with an adherent placenta, manual removal was done. Shock occurred and patient died 7 hours after delivery.

There has been a definite reduction in the mortality rate in recent years by the administration of blood and intravenous fluids. There has also been a reduction in post-partum haemorrhage due to the use of ergometrine intravenously instead of intramuscularly. There were 23 maternal deaths giving a gross maternal mortality of 7.3 per cent. Of the 23 deaths, half of them were admitted in a moribund condition and died in spite of resuscitative measures. Four deaths were due to causes like

TABLE XIII
State of babies at birth

Year	Live births	Still births	Dead births	Neonatal deaths	Total babies born	Number of multiple pregnancies
1950	55	5	7	2	69	1 set of twins
1951	39	3	4	13	59	—
1952	40	3	5	5	53	2 sets of twins
1953	39	1	4	5	49	nil
1954	67	3	12	11	93	3 sets of twins and 1 triplet
Total	240	15	32	36	323	
Percentage	74	5	10	11	—	

pulmonary oedema, pulmonary embolism, small pox, and peritonitis. In four cases there was a predisposing cause, anaemia in three and pre-eclamptic toxaemia in one. It was only in 10 cases that the death could be attributed to post-partum haemorrhage and shock resulting from a retained or adherent placenta. Thus the corrected mortality may be considered to be as low as 3.2 per cent.

There were 323 babies born with 74% live births, 5% still births, 10% dead births and 11% neonatal deaths.

Summary

An analysis of 315 cases of adherent and retained placenta is presented. The incidence of the complication is 0.69%. The incidence of post-partum haemorrhage and shock are 69% and 46% respectively. The maternal morbidity was 40% and gross maternal mortality 7.3%. The corrected maternal mortality was 3.2 per cent. The administration of blood and fluids has reduced the mortality by a significant degree. The highest mortality was among those patients who delivered outside the hospital and who were admitted in a state of severe shock.