

Antepartum haemorrhage—A historical review

by

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The subject of antepartum haemorrhage (A.P.H.) is not only a very fascinating one, it also presents to us a challenge—a challenge to explore the unknown and to extend the frontiers of knowledge. Sound rational therapy of any disease comes only from the knowledge of the basic aetiological mechanism. So it is with the management of A.P.H.

Changing Concepts Of A.P.H.

The first step at elucidating the aetiology of A.P.H. can be said to have begun with Edward Rigby (Table 1) who divided A.P.H. into "Inevitable" (Placenta Praevia) and 'Accidental' (Normally situated placenta).

The present day concept of A.P.H. is represented by the classification put forward by F.J. Browne (Table 2.) At present the bugbear of A.P.H. is the third group viz. A.P.H. of 'Unknown Origin.' This group accounts for more than a third of all cases of A.P.H. and a not inconsiderable percentage of foetal wastage.

Attempts to unravel the possible underlying mechanisms that initiate the haemorrhage are represented by the subclassification shown in Table 3, 4 and 5. In the FitzGerald's Classification one is reminded that A.P.H. can have more than one aetiological basis.

Table 1

<p>Classification Of A.P.H. Edward Rigby, 1776.</p> <ol style="list-style-type: none"> 1. Accidental 2. Inevitable

Tables 2, 3, 4, & 5

F. J. Browne, 1944

1. Placenta Praevia
2. Accidental Haemorrhage from normally situated placenta.
3. A.P.H. of doubtful origin.
4. Extraplacental causes.

Murdoch, 1952.

Accidental Haemorrhage—

1. Toxic
2. Non-toxic

Bender, 1953.

Placenta Praevia due to—

1. Mechanical Separation.
2. Toxic Separation.
3. Other causes.
4. No Bleeding.

Fitzgerald, 1954.

Hybrid Syndrome

1. Placenta Praevia with mechanical & toxic causes.
2. P.P. mimicking A.H.
3. A.H. mimicking P.P.

Increasing Knowledge & Decreasing Mortality

".....The excellency of knowledge is that wisdom giveth life to them that have it."

—Ecclesiastes: 7:12.—

Table 6 attempts to show how increasing understanding of the pathology of A.P.H. had resulted in more rational methods of management. That the management was rational is borne out by the significant lowering of maternal mortality rate (M.M.) and foetal mortality rate (F.M.).

Table 6

Period	Current View	Management	Result
1. Up to 1800 (Simpson)	Bleeding—placental in origin.	Expedite Delivery	M.M. 30% F.M.? 60%
2. 1823 (Ramsbotham)	VE. disturbs 'Coagula'	No VE in mild cases	M.M. 18% F.M.? 60%
3. 1864 (Braxton Hicks)	Accouchment forcé is dangerous	Bipolar podalic version	M.M. 4.5% F.M.? 60%
4. 1936 (Comyns Berkeley)	1. C.S.) 2. Blood) Transfusion.)	Ancillary Advances	M.M. 7% F.M. 59%
5. 1945 (Macafee)	First bleeding rarely fatal.	Conservative management in selected cases.	M.M. 0.5% F.M. 22%
6. 1959 (Kimbrough)	— 169 cases of P.P. V.D.—30% C.S.—70%		M.M. 0 F.M. 4.2%

In the early periods, treatment was directed solely with the view to saving the mother. The sure way of stopping bleeding in A.P.H. was to empty the uterus. Hence in all cases of A.P.H., the aim was to expedite delivery. **Accouchment Force** was the vogue of the period. About one-third of these mothers lost their lives under this regime. Foetal loss was presumably so considerable that it was seldom mentioned in articles on A.P.H.

The first major advance in the management of A.P.H. occurred when Ramsbotham (1823) postulated the danger of **vaginal examination**. He believed that bleeding often stopped spontaneously by the formation of 'coagula' and that by vaginal examination, this coagula might be dislodged, thus provoking dangerous haemorrhage. He therefore, forbade vaginal examination for mild cases of A.P.H. The drop in M.M. from 30% to 18% borne out the soundness of his postulate.

The second milestone in the advance in management of A.P.H. came with Braxton Hick's condemnation of **Accouchment Force** as an obstetric manoeuvre. He advocated **Bipolar Podalic Version** and plugging of the os with the half-breech to stop bleeding, allowing delivery to occur in its own time. By this method, he was able to lower the M.M. to 4.5% from 33% when accouchment Force was the practice.

Until quite recently, there was very little difference in the management of A.P.H. cases, be it of the 'inevitable' or 'accidental' variety. You will notice from Table 6 that in spite of ancillary advances, such as Caesarean Section and Blood Transfusion, the M.M. and F.M. figures of Comyns Berkley (1936), were not much of an improvement over that of Braxton Hick (1863).

Macafee, "The Heretic."

The next great advance in the management of A.P.H. with respect to cases of suspected pla-

centa praevia occurs in period 5 of Table 6. Hitherto, it was believed that to temporize in a case of A.P.H. (with the hope of obtaining a more mature foetus) was trading the life of the mother for that of the foetus. Quite rightly, the former should take priority.

It took the courage of a 'heretic' like Macafee (1945), to try **conservative management** in selected cases of A.P.H., a practice quite contrary to the prevailing thought of the day. He, like others too, realized that to improve foetal salvage, prematurity must be avoided. He believed that the first bleeding was rarely fatal and that provided no vaginal examination was done except in institutions where facilities for immediate abdominal delivery were available, the mother's life need not be jeopardised. This view was amply vouchsafed by the result he published. There was not only a significant lowering of F.M. but there was a greater lowering in M.M.

With the increasing safety of **Caesarean Section**, the problem of A.P.H. from placenta praevia has almost been resolved. In the latest series by Kimbrough, there was no maternal death in 169 cases, the foetal mortality was at an all time low of 4.2%

Similar Trend in Accidental Haemorrhage

A similar trend in the improvement in the management of Accidental Haemorrhage (A.H.) can be traced through the same period (Table 7). Although there are still many gaps in our knowledge of the 'whys' and 'wherefores' in A.H., nevertheless, through **ancillary advances** and an increasing use of Caesarean Section, there has been a considerable improvement in the F.M. and M.M. figures.

Table 7

Period	Knowledge	Management	Result
1. Rigby, 1776	Inevitable from Accidental	1. Extraction 2. Plugging 3. Doughing	
2. Ramsbotham 1851	Concealed Accidental Haemorrhage = Goodall, 1870—106 cases of concealed A.H.		M.M. 50% F.M. 95%
3. Waiter, 1885	Albuminuria & Accid. Haem.	4. A.R.M. Binder Ergot.	
4. Ley, 1920	Toxaemia & Accid. Haem.	5. C.S. 6. Blood Transfusion 7. Pitocin	
5. Dieckmann, 1936	Toxic from Non-toxic A.H. = Mahfouz, 1939—314 cases A.H.		M.M. 6.1% F.M. 49%
6. Kimbrough, 1959	383 cases A.H. Before labour ... During labour ...	V.D. 40% 92% C.S. 60% 8%	M.M. 0.26% F.M. 14.3%

'Unknown' Group of A.P.H.

With the marked improvement in the management of A.P.H. of known causes, the A.P.H. of 'unknown' or 'doubtful' origin has assumed greater prominence.

Some one-third to one-half of all A.P.H. comes under this category (Table 8). Sexton in

the U.S.A. published a series of 276 cases of A.P.H. of which 101 belonged to this group, which he called 'non-toxic A.H.'. Similarly, Macafee of Belfast had 61 cases of A.P.H. of 'doubtful origin' out of his series of 134 cases of all varieties. Murdoch in Hammersmith substantiates the figures of both the previous authors with his collection of 339 cases.

Table 8

Importance Of "Unknown" A.P.H.

40-50% of all A.P.H.—F.M. 40%

1. Sexton (1950) - "Non-toxic A.H."
101/276
2. Macafee (1951) - "Doubtful ori-
gin" 61/134
3. Murdoch (1952) - "Non-toxic A.H."
169/339

Surprisingly enough, the F.M. figures in these 3 widely separated groups of cases are very similar. The foetal wastage from this 'unknown' group now accounts for some 40% of the total F.M. in all varieties of A.P.H. Here then is the challenge; here then is the bottom of the barrel where one scraps for more foetal salvage in cases of A.P.H.

Table 9 is a list of the alleged possible causes of 'Non-toxic A.H.' and of A.P.H. of 'Unknown' origin. These are possible avenues by which one might explore and find out the underlying mechanisms that account for the bleeding, thereby en-

abling rational therapy to replace the present empirical management with its associated high foetal wastage.

Table 9

Alleged Possible Causes Of Non-toxic A.H. and "Unknown" A.P.H.

1. Trauma — psychic, physical.
2. Uterine Torsion — venous congestion.
3. Short cord.
4. Dietetic—Vitamin E, C.
5. Hydramnios, twins.
6. Multiparity—subinvolution.
7. Chronic endometritis.
8. Fibroid.
9. Decidual.
10. Foetal vessels in membrane
c.f. vasa praevia.
11. Abnormal placental develop-
ment—marginal bleeding.
12. Marginal sinus.
13. Endocrinal.
14. Allergy.