South African Medical Journal : Suid-Afrikaanse Tydskrif vir Geneeskunde

Cape Town, 9 May 1959 Volume 33 No. 19 Deel 33 Kaapstad, 9 Mei 1959

General Practice Series

ANTEPARTUM HAEMORRHAGE

F. N. Charnock, M.B., Ch.B., M.R.C.O.G.

Senior Lecturer and Obstetrician and Gynaecologist, University of Cape Town and Cape Provincial Administration

Antepartum haemorrhage is defined as bleeding from the genital tract occurring at any time between the 28th week of pregnancy and the delivery of the child. It is a condition of major importance in obstetrics and still, in spite of marked improvement in treatment, ranks as the fourth commonest cause of maternal deaths in many published figures.[1] Improvement in treatment has resulted in a fall of maternal mortality from 5-7% in 1939 to under 1% at present, but foetal wastage, although it has dropped from 60% to 20% and under in the same time, is still very high, particularly so in accidental haemorrhage.

Causes

The causes of antepartum haemorrhage are as follows:

1. Accidental haemorrhage, in which bleeding occurs from the site of a normally situated placenta.
2. Placenta praevia, or so-called unavoidable haemorrhage. Here the placenta is attached partially or wholly in the lower uterine segment.
3. Associated causes, such as varicose veins in the vagina, carcinoma of the cervix, vasa praevia, and circumvallate placenta.
4. In a large group of cases the cause is never definitely diagnosed. These are frequently classified as accidental haemorrhage. This group may constitute as much as 40% of all cases of antepartum haemorrhage.

Symptoms and Signs

The bleeding occurring in placenta praevia is characteristically painless, causeless, and bright red in colour; it often occurs while the patient is at rest. It usually stops spontaneously, only to recur at a later date. The first warning bleed may be slight but the loss tends to increase at each recurrence. On palpation, a high presenting part cannot be made to engage and a slowing of the foetal heart rate may be associated with the attempt. Occasionally an anterior placenta praevia may be felt to obscure the presenting part. The foetal heart is usually audible.

In accidental haemorrhage pain is often present and the bleeding may be dark in colour. In many cases an associated toxaemia of pregnancy or hypertension is present or there may be a preceding history of trauma such as external version. On palpation uterine tenderness may be found, and if the presenting part is not engaged, it can be made to do so. In the severer cases foetal heart sounds are often absent. In the severer types, too, the patient will be extremely shocked and the shock will be out of all proportion to the external blood loss. Unfortunately, in many cases the diagnosis between accidental haemorrhage and placenta praevia, on the clinical features just mentioned, is not clear cut.

In some cases of placenta praevia the placenta, though large, may be very thin and the presenting part may be engaged. Toxaemia of pregnancy can occur with placenta praevia, and if the patient is in labour she may have pain. The trauma of intercourse can also cause bleeding in a case of placenta praevia. What is more, an accidental haemorrhage may occur in a patient whose placenta is situated 'praevia'.

A definite diagnosis of placenta praevia can only be made by feeling (on vaginal examination) the placenta in the lower segment, or at Caesarean section. In the presence of antepartum haemorrhage, however, vaginal examination should only be carried out in an operating theatre with everything prepared for section.

A large number of cases, as stated above, fall into the 4th category, where a definite diagnosis is not made. These cases are often included in the group of accidental haemorrhage, the diagnosis being determined by the probable exclusion of placenta praevia. The haemorrhage is often only slight in these cases and as a result there has been a tendency to neglect this group. Macafee[3] and Donald[2], among others, have recently shown that the foetal loss is comparatively high and that more attention should be paid to these patients.

TREATMENT

Antenatal Care

As in all obstetrical conditions, good antenatal care is of primary importance. It has helped to reduce both the maternal and foetal mortality from antepartum haemorrhage. Antenatally, every pregnant woman should have blood examinations made and Rh grouping done. Routine haemoglobin estimation will ensure that no anaemia is present to exaggerate the effects of a possible antepartum haemorrhage. The early treatment and diagnosis of hypertension and associated conditions in pregnancy will tend to minimize the chances of accidental haemorrhage occurring. Abnormal presentations, particularly in a primigravida, should suggest the possibility of placenta praevia. Stallworthy[4] has shown the importance of a high presenting part which cannot be made to engage. In such cases, with radiological

help, he succeeded in diagnosing 16·5% of his cases of placenta praevia before bleeding had even occurred.

Treatment at Home

If the practitioner is summoned by telephone, he should instruct the patient to remain in bed while awaiting his arrival. She should retain all evidence of the amount of blood lost. Unless the bleeding has been slight, she should be given ¼ gr. of morphine. After a pertinent history-taking the patient's general condition should be assessed in the usual manner. Gentle abdominal palpation is carried out to observe any abnormal lie, uterine contractions, tenderness, or rigidity. The foetal heart should be auscultated. It is a basic principle that all cases of antepartum haemorrhage, wherever possible, should be admitted to an institution.

Another basic principle is that no vaginal examination should be made in such cases outside a fully prepared theatre, for it often precipitates a serious and possibly catastrophic haemorrhage. Two exceptions to this rule are (*a*) when there is no theatre and (*b*) when the haemorrhage is so brisk that immediate action is called for.

If the patient is suffering from shock, this should be treated and, where available, the emergency obstetrical service, or 'obstetrical flying squad' should be summoned before transfer to hospital. Blood transfusion, if necessary, can then be started before the patient is moved. Fortunately, bleeding so severe and persistent as to prevent transfer of the patient is extremely rare and if it occurs it is usually due to unwarranted vaginal examination. However, if it does occur, and possibly if the practitioner is a great distance from the nearest hospital, the membranes should be ruptured an either a vulsellum applied to the head of the foetus or a leg brought down.

Treatment in the Institution

On admission to hospital, the patient must immediately have her blood group and Rh checked and compatible blood must be kept at hand. If necessary, blood transfusion is given. A general abdominal examination should again be gently made. In most cases the bleeding would have stopped and the patient should be kept under observation. Usually 2 days after the cessation of bleeding a speculum can be passed and any local pathological condition of the cervix and vagina excluded. This can be done sooner if the bleeding has been very slight, but rough handling may precipitate further bleeding.

If the foetus is not yet considered viable and the bleeding has stopped, then so-called expectant or conservative treatment is carried out. This modern form of treatment has as its object the final delivery of a foetus which stands a good chance of survival and one tries to tide the patient over till 37 or 38 weeks. Unfortunately, conservative treatment, although it has helped to improve both foetal and maternal mortality, compels the patient to spend many weeks in hospital, and then at the end one may find no placenta praevia has been present. It is hoped that improved radiological diagnosis of placenta praevia—so-called placentography—may in the future be of greater help in eliminating this disadvantage. However, the placenta may appear low-lying at the 30th week and yet not be so at the 36th or 38th week.

Expectant treatment, however, is not carried out if (1) the haemorrhage persists, (2) the patient is in labour, (3) the foetus is considered viable, or (4) the foetus is dead or distressed.

In these cases the patient is examined vaginally under anaesthesia in the theatre with everything prepared for possible Caesarean section. Lower-segment section is carried out immediately if:

1. A central or complete type of placenta praevia is found, or

2. The placenta, though not covering the internal os, lies posteriorly over the promontory of the sacrum preventing engagement or interfering with the blood supply to the foetus by compression of the placenta between the presenting part and the promontory.

In other cases of the incomplete type all that may be necessary is artificial rupture of the forewaters. However, if, in spite of this, bleeding persists, and particularly if the patient is not in labour or is a primigravida, Caesarean section is the safer procedure. Watch should always be kept on the foetal heart, for foetal distress may also necessitate immediate delivery. If a placenta praevia is not felt and bleeding does not ensue, the patient is returned to her bed. After 24 hours, if labour has not commenced, she may be discharged.

The old treatment of bringing down a leg and controlling the bleeding with the half breech is now rarely employed owing to the very poor foetal results. It may be indicated in an emergency where severe bleeding is present and facilities for immediate section are not available, or when the child is already dead or so premature as to have no chance of survival.

If the placenta is anterior, it may be incised during the Caesarean section. The baby must be examined for anaemia immediately after delivery. To try and minimize foetal blood loss the cord should be clamped as soon as possible.

Accidental Haemorrhage

Many slight cases of accidental haemorrhage are treated in the first instance as suspect cases of placenta praevia and only diagnosed as presumed accidental haemorrhage, or put in the undiagnosed group, when placenta praevia has been excluded on vaginal examination. These haemorrhages are often single and there is only a slight tendency to recur. Sedative treatment and rest is all that is necessary. In more severe cases there will be abdominal tenderness and tenseness and a varying degree of shock. In the typical severe type the revealed bleeding may at first be only very slight and the shock is out of all proportion to the external blood loss. In these cases it is imperative first to treat the patient's general condition. Toxaemia of pregnancy or hypertension is often present and the blood-pressure reading may be misleading. If blood transfusion is required, great care must be taken with compatibility tests and fresh blood is preferable. Pulse rate, blood pressure and urinary output are charted. The height of the fundus is noted and the girth measured. Thus any increase in size of the uterus can be observed. It is important to note whether the patient's blood clots and if there is any doubt the blood fibrinogen should be estimated.

Most obstetricians now agree that once treatment for shock has been instituted, vaginal examination should be made and the membranes ruptured. Theoretically rupture of the membranes diminishes the chance that fibrinogenopenia will develop and also usually accelerates delivery.

Caesarean section is carried out in those rare cases which do not respond to this treatment. As the foetal mortality is so high, many authorities also advise its use if the foetal heart is still audible—particularly if the patient is a primigravida and the cervix only slightly dilated. It is hoped that with our recently acquired knowledge of fibrinogen therapy, Caesarean hysterectomy for persistent bleeding, even after the uterus has been emptied, may very rarely be necessary.

In all cases of antepartum haemorrhage the third stage must be conducted with great care, for further haemorrhage at this stage may be the last straw. In the severer cases of accidental haemorrhage one must, after delivery, still be on the watch for serious renal damage, as evidenced by oliguria.

CONCLUSION

The value of good antenatal care must again be emphasized, and the early admission to hospital of all cases of antepartum haemorrhage cannot be over-emphasized.

The figures at our maternity hospitals in Cape Town (Table I), and figures elsewhere, all show the far higher incidence and higher foetal and maternal mortality in unbooked cases who have not received proper antenatal care. The excellent results which have been published by Macafee, Stallworthy and others have only been obtained through thorough care of the patient both outside and inside the hospital.

TABLE I. CASES OF ANTEPARTUM HAEMORRHAGE DEALT WITH IN 1956 BY THE MATERNITY INSTITUTIONS UNDER THE AEGIS OF THE UNIVERSITY OF CAPE TOWN

	Cases	*Maternal Deaths*	*Total Foetal Loss*	*% Foetal Loss*
Booked Cases ..	163	0	26	16
Emergency Cases ..	184	0	93	51
Total	347	0	119	34

Finally, one must again stress the danger of vaginal examination in the patient's home. That this danger is still not fully recognized is shown by the number of patients admitted for antepartum haemorrhage who have been subjected to vaginal examination before admission.

REFERENCES

1. Stabler, F. (1955): Brit. Med. J., **2**, 290.
2. Donald, I. (1955): *Practical Obstetrical Problems*, p. 207. London: Lloyd-Luke Ltd.
3. Macafee, C. H. G. (1945): J. Obstet. Gynaec. Brit. Emp., **52**, 313.
4. Stallworthy, J. (1951): Proc. Roy. Soc. Med., **44**, 121.