REFRESHER COURSE FOR GENERAL PRACTITIONERS

POST-PARTUM HAEMORRHAGE

BY

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Every clinician knows what post-partum haemorrhage is, but it has nevertheless eluded all attempts at a satisfactory definition. Strictly speaking, post-partum haemorrhage can take place only after the birth of the placenta, but the term has been used to connote haemorrhage which occurs from the birth canal after the delivery of the child. Some describe post-partum haemorrhage as excessive bleeding, others describe it as blood loss above a certain proportion of body weight, while others define it as that degree of haemorrhage which causes constitutional symptoms. All these definitions are unsatisfactory. Under the ordinary conditions of domiciliary midwifery it is impossible to measure the blood loss and to express it in terms of body weight. Constitutional symptoms may not become manifest until some time after the haemorrhage has occurred, therefore they are no guide to either diagnosis or treatment.

I have always maintained that any bleeding, however slight, which persists after the birth of the child is post-partum haemorrhage. This definition has the merit of being precise, and, if adopted, makes it possible almost invariably to prevent excessive haemorrhage.

Haemorrhage occurring within six hours (some authorities prefer the time limit of 12 or 24 hours) of the birth of the child is designated primary post-partum haemorrhage, whereas that occurring after this arbitrary time limit is styled secondary post-partum or puerperal haemorrhage.

Predisposing Factors

These are:

- (1) Anaemia.
- (2) Blood dyscrasias.
- (3) Insomnia at the end of pregnancy.
- (4) Exhaustion during labour.
- (5) Precipitate labour.
- (6) Overdistension of the uterus, either by multiple pregnancy or by hydramnios.
- (7) Anaesthesia, particularly when it is prolonged or too deep.

It has been asserted that red-haired women are more likely to suffer from post-partum haemorrhage than either blondes or brunettes, but I have not been able to substantiate this widely held belief. Some women give a history of serious bleeding after each delivery, and it is a wise precaution to anticipate post-partum haemorrhage in such patients even though the expected rarely happens.

It is thus clear that most of the factors which predispose to post-partum haemorrhage can be treated or prevented. In any case, it is excellent practice to give every woman a good course of iron for at least six weeks during her pregnancy. A haemoglobin estimation should be made in every expectant mother early in pregnancy. If laboratory facilities are not available the Tallqvist method, which is accurate to within 10-15%, should be adopted. The Regional Blood Transfusion Laboratories will group the

blood and determine the rhesus factor, and this information is important should a blood transfusion become necessary.

Third Stage of Labour

As soon as the infant is delivered the mother should be turned on to her back and placed on a clean piece of draw-sheet. Gentle traction should be applied to the cord to remove any loop which may be present in the vagina, and, using applied artery forceps, the extravaginal cord should be put in a kidney-dish placed between the mother's thighs.

Immediately after the birth of the child the level of the fundus can be seen about two fingerbreadths below the umbilicus. At this stage it is flattened from before backwards and cannot be easily moved from one side of the abdomen to the other.

After a varying time the uterus can be seen to contract and bulge forward, and as a result of two or three such contractions the level of the fundus of the uterus rises to about two fingerbreadths above the umbilicus. It can be seen and felt to be globular and can be moved freely from one side of the abdomen to the other. Closer inspection often reveals a slight forward bulge in the abdomen immediately above the symphysis pubis. This is the placenta in the vagina, on which the globular uterus rides. It often happens that a slight spurt of blood accompanies the uterine contractions which have been described, and not infrequently the extravaginal cord can be seen to lengthen. Do not attempt to expel the placenta (unless haemorrhage occurs) until (1) the level of the fundus is well above the umbilicus; (2) the globular uterus can be freely moved from side to side; and (3) the extravaginal cord does not shorten when the uterus is drawn upwards. When these conditions are fulfilled the uterus should be gently stimulated to a contraction and the fundus pushed downwards and backwards. As soon as the placenta is delivered the fundus should be drawn upwards, so drawing the uterus from the membranes rather than dragging the membranes from the uterus. The latter should then be well massaged between the two hands, the palmar surface of the lower hand being placed just above the symphysis pubis, pointing upwards.

To Control or Not Control the Fundus?

The usual teaching in this country is that a hand should be placed, with the palmar surface pointing downwards, just above the fundus of the uterus in order to find out how it is behaving, but not to control it. So long as this hand remains still, does not keep rubbing up the uterus to a contraction, and is not itching to find out whether the third stage can be terminated, it can do no harm and may provide comfortable assurance. An increasing number of obstetricians are becoming convinced of the fact that an irritated uterus may contract irregularly and so cause post-partum haemorrhage. Some recommend "controlling" the uterus with the back of the hand, but others have

adopted the practice, very common on the Continent, of leaving the uterus alone.

I would stress that in nearly every case the uterus can be observed with the eye and therefore does not need to be handled. Secondly, so long as the placenta is in the uterus it never fills up with blood without some appearing on the draw-sheet. Therefore, while the draw-sheet remains clean and dry there is no fear that intrauterine haemorrhage is occurring. It must be stressed, however, that once the placenta is away the uterus can become distended with blood without any external evidence of bleeding.

Treatment of Post-partum Haemorrhage

It has been postulated that any continuous or intermittent bleeding, however slight, which occurs after the birth of the child is post-partum haemorrhage. If, therefore, the draw-sheet does not remain dry the bleeding must be investigated and stopped (if no clean sheet is available newspaper or brown paper well scorched in front of the fire serves almost equally well).

Some obstetricians repair their episiotomy wounds and perineal tears immediately the infant is born, while others prefer to wait until after the placenta is delivered. Much blood can be lost from such wounds, and if they are not repaired immediately any bleeding from them should be controlled with gauze or cotton-wool. If the haemorrhage is not coming from such a source the vagina should be examined in order to exclude the possibility of a vaginal laceration. Fortunately, the cervix, though it is nearly always damaged by delivery, rarely bleeds much.

The placental area is by far the most common and the most serious site from which post-partum haemorrhage occurs. We do not yet know for certain how the placenta separates, but it probably does so during the first two or three uterine contractions after the birth of the child. While the placenta remains completely attached to the uterine wall no bleeding can occur. Further, no bleeding can take place into the uterine cavity if the margin of the placenta remains attached to the uterine wall throughout its circumference. When the central portion of the placenta becomes detached a retroplacental haemorrhage occurs, and this is the probable method by which the placenta is normally separated. There is some evidence to suggest that abnormal separation of the placenta may sometimes be due to minor and unsuspected developmental errors of the uterus.

If bleeding continues, and does not obviously come from a perineal or vaginal wound, it must be assumed that it comes from the placental site. Gently rub the uterus to a contraction and see whether by this measure the bleeding can be stopped. Find out whether the placenta is partly or mainly in the vagina, and, if it is, try to express the placenta by squeezing the uterus and pressing downwards and backwards.

If the bleeding persists, and the placenta cannot be expressed, the patient should be anaesthetized and a further attempt made to express the placenta by Credé's method. If this fails, it must be removed manually and without delay.

Manual Removal of the Placenta

The patient should be placed in the cross-bed position and the external genitalia thoroughly washed with soap and water or a solution of any suitable antiseptic. "Dettol" cream should then be poured generously over the vulva, into the vagina, and over the gloved hand to be inserted into the uterus. If no sterile towels are available an ordinary boiled sponge-bag can be placed over the left

hand, which is to be placed on the abdomen. The right hand follows the cord up to the placenta. If it is on the posterior wall separation is usually easier from below upwards. While controlling the uterus with the left hand, and working inside the membranes, find the layer of cleavage and separation will prove easy. After the placenta is removed reintroduce the hand into the uterus to make sure that no removable portions of placenta are left behind. It is not necessary to introduce the hand more than twice into the uterine cavity. Do not give an intrauterine douche, it is not necessary and may spread infection through the Fallopian tubes. It is essential that the uterus be felt at not more than 15-minute intervals for at least two hours after the patient is returned to bed.

Immediately the placenta is delivered give 0.25 mg. of ergometrine intravenously or 5 units of oxytocin intramuscularly. It is usually desirable to give morphine $\frac{1}{4}$ gr. (16 mg.) as soon as the patient is back in bed. It is also expedient to give penicillin prophylactically, and for those in general practice 500,000 units of procaine penicillin intramuscularly every eight hours for the first 48 hours is most convenient.

It is obvious that once the general practitioner decides to treat post-partum haemorrhage he cannot stop half-way and must proceed if necessary to manual removal of the placenta. If he thinks that the surroundings and the equipment do not justify his taking this line of action it is probably best for him to attempt to control the bleeding by giving an intramuscular injection of 0.5 mg. of ergometrine before sending for the ambulance or consultant aid.

Results of Haemorrhage

As a general rule a woman bears one serious haemorrhage better than a continuous slow bleeding over a prolonged period. For as long as 10 minutes after a severe haemorrhage the woman may appear normal, and if her ear lobes are pinched they may flush pink. The signs of shock and haemorrhage subsequently supervene. The uterus becomes atonic, and the walls may become almost imperceptible, even to a hand inside the uterine cavity.

Treatment

Morphine $\frac{1}{4}$ gr. (16 mg.) should be injected and a blood transfusion given. It is most fortunate that the blood transfusion service is available to nearly every woman in the country. Rhesus-positive blood must not be given unless the patient is known to be rhesus positive, and it is important that the doctor should always have this information to hand. While waiting for the blood it is desirable to give fluid intravenously, and sterile bottles of glucose-saline prepared for this purpose should invariably be included in the midwifery kit. In grave emergencies a teaspoonful of common salt can be added to a little water and boiled, and then introduced into a pint of sterile water and given either intravenously or subcutaneously.

When Should the Placenta be Removed ?

This is sometimes a very difficult problem, particularly when the patient is shocked and has lost much blood. Provided the patient is not losing per vaginam, and the uterus is not distended, it is permissible to wait until from 500 ml. to a litre of blood has been introduced. The doctor should, however, remain scrubbed up and prepared at a moment's notice to remove the placenta. I have seen a collapsed patient have a final and fatal haemorrhage shortly after the blood transfusion had begun, and there is no doubt that the tendency is to err in waiting too long before removing the placenta. If a suitable anaesthetic is given

the removal of the placenta does not seem to harm the patient. Each case must be judged on its merits, but the sooner the placenta is removed the better.

Secondary Post-partum Haemorrhage

It not infrequently happens that haemorrhage may recur three to four hours after a primary post-partum haemorrhage has been successfully treated. It is most important that the uterus should be examined at frequent intervals for the first four hours after a primary post-partum haemorrhage. At the earliest sign of vaginal loss 0.25 mg. of ergometrine should be injected intravenously or 5 units of oxytocin intramuscularly. Fortunately the transfusion of blood makes this event less probable.

It is a matter of dispute whether it is better to remove a patient who has had a post-partum haemorrhage to hospital or leave her in her own home. The removal of a shocked patient is undesirable, but in the view of many it is better to take that risk if the patient cannot be adequately watched and treated at home.

Puerperal Haemorrhage

Haemorrhage which occurs some days after delivery (usually within 14 days) and which is not secondary to a primary post-partum haemorrhage is best termed puerperal haemorrhage. It is almost invariably due to retained products of conception and usually to a portion of placenta. The importance of examining the placenta and membranes before leaving the house, and writing down whether they are complete or incomplete, is evident. A succenturiate lobe of placenta is easily missed but is probably not the commonest cause of puerperal haemorrhage. The retained portion of placenta may be passed after a good dose of castor oil, or as the result of giving some preparation of ergot—for example:

Extractum ergotae liquidum ...	10 min. (0.6 ml.)
Acidum sulphuricum dilutum ...	10 min.
Aqua chloroformae ad ...	½ fl. oz. (14 ml.)

Sig. ½ fl. oz. t.i.d. for not more than 5 days

If the haemorrhage much exceeds the normal loss it is probably safer to explore the uterus under an anaesthetic and to remove any portion of placenta or membranes that may be present. Never give an intrauterine douche in such circumstances, as some degree of infection is sure to be present. If the haemorrhage is associated with pyrexia it is desirable to give penicillin and a sulphonamide drug—for example, procaine penicillin 500,000 units eight-hourly; "sulphatriad" 1 g. every four hours. The penicillin should be continued until the patient has been apyrexial for 48 hours, but not more than 25 mg. of sulphatriad should be given.

It is generally agreed that the placenta can be left in place for one hour with complete safety. There are some who maintain that after this time toxic symptoms may supervene. Leaving aside this interesting point, it is clearly necessary for the placenta to come away, and if it cannot be expressed within two hours after the birth of the child it is justifiable to remove it manually. As there is no urgency in the matter, circumstances might make it desirable to send the patient into hospital.

It sometimes happens that the spongy layer of the placenta becomes fibrous, and it may even be absent. In these rare cases it may be necessary to perform hysterectomy. A partial placenta accreta associated with post-partum haemorrhage is a complication which is fortunately rare, but which may prove fatal.

Unusual Causes of Post-partum Haemorrhage

It sometimes happens that small vessels in the lower uterine segment are torn. Bleeding may be controlled by plugging the uterus with six yards (5.5 metres) of four folds of 6-in. (15-cm.) gauze. This line of treatment is not without danger and is very rarely indicated. Rupture of the uterus can be an undiagnosed cause of post-partum haemorrhage.

Post-partum haemorrhage not only kills directly but it renders the woman prone to death from shock or from puerperal infection. It is universally agreed that obstetric shock rarely if ever occurs apart from haemorrhage. It has been said that there is no such thing as obstetric shock, but only shocking obstetrics. If it does not kill, it incapacitates and may lead to prolonged ill-health and infertility. There is, moreover, evidence that it may cause damage to the anterior pituitary gland and thus have severe consequences.

Summary of Treatment

During Pregnancy.—(1) Routine haemoglobin estimations, (2) a course of iron therapy, and (3) prevent insomnia.

During Labour.—(1) Never allow labour to be prolonged without adequate sedation, (2) treat hydramnios with respect and if possible in hospital, (3) never hurry the second twin, (4) avoid prolonged or deep anaesthesia, and (5) it is quite a good practice, if a second pair of hands is available, to inject 0.125 mg. of ergometrine intravenously as soon as the anterior shoulder is delivered.

The proper treatment of post-partum haemorrhage is to prevent it. Look after the steady trickle and the flood will take care of itself.

THE TEACHING HOSPITAL AND THE GENERAL PRACTITIONER*

BY

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So much has been said and written lately on this subject that it is difficult to speak on it without platitudes. I do not hope to put forward new ideas, but to express and clarify my own views on a well-known topic so that discussion and interest may be stimulated. I shall start with some comments on the increased responsibility of the general practitioner.

During the last twenty years a sequence of discoveries has given him greater powers. Where hitherto he played a relatively passive part, he has now been given remedies which tip the scales between life and death. Many diseases which could be treated only symptomatically and were often fatal can now be aborted and cured by specific remedies. Most forms of meningitis, pneumonia, and infective endocarditis are examples of infections, and there are many others in which prompt action by the general practitioner may make all the difference between death and recovery or between a short and comparatively slight illness and a long and disabling one. Twenty years ago failure or delay in diagnosing these was mainly a blow to the doctor's pride: to-day it may be lethal to the patient.

*A lecture delivered at Addenbrooke's Hospital on November 9, 1949.