OXFORD MEDICAL PUBLICATIONS

MANAGEMENT IN OBSTETRICS

BY

ANDREW M. CLAYE

M.D., F.R.C.S., F.R.C.O.G.

PROFESSOR OF OBSTETRICS AND GYNAECOLOGY
UNIVERSITY OF LEEDS;
SURGEON, MATERNITY HOSPITAL AND
HOSPITAL FOR WOMEN, LEEDS;
EXAMINER, UNIVERSITIES OF OXFORD, CAMBRIDGE,
AND BELFAST, AND CONJOINT BOARD IN ENGLAND;
LATE EXAMINER, UNIVERSITIES OF ABERDEEN
AND MANCHESTER AND THE ROYAL COLLEGE OF
OBSTETRICIANS AND GYNAECOLOGISTS.

SECOND EDITION

LONDON
OXFORD UNIVERSITY PRESS
NEW YORK TORONTO
1956

Oxford University Press, Amen House, London E.C.4

GLASGOW NEW YORK TORONTO MELBOURNE WELLINGTON
BOMBAY CALCUTTA MADRAS KARACHI CAPE TOWN IBADAN

First Edition 1948
Second Edition 1956

PRINTED IN GREAT BRITAIN BY
MORRISON AND GIBB LIMITED, LONDON AND EDINBURGH

PREFACE TO THE SECOND EDITION

I SEND this edition out still hoping that the general practitioner, suitably trained, will come to play his proper part in the maternity services. At present only about 20 per cent. of all maternity patients outside hospital are being attended in labour by their doctor, and I am quite unable to understand how a man can obtain either enjoyment or intellectual stimulus if he practises so-called midwifery without presiding at the culminating event.

There is an urgent need for more general practitioner maternity beds, as recommended in the Report on the obstetric service under the National Health Service, published by the Royal College of Obstetricians and Gynaecologists in 1954. The provision of such beds might, among other desirable results, increase the interest of the family doctor in midwifery.

New chapters have been written on postmaturity and on retained placenta, and several fresh illustrations have been added. The whole book has been thoroughly revised.

I am indebted to Miss Ursula Lister, M.D., F.R.C.S.E., M.R.C.O.G., for kindly reading the proofs, and to Miss Clarke, Almoner at Leeds Maternity Hospital, for providing Appendix III, to Miss E. M. Read, Librarian at the School of Medicine, Leeds, for help with my references, and to Miss Ebner, Principal of the School of Physiotherapy, for providing Appendix II.

ANDREW M. CLAYE

January 1956

PREFACE TO THE FIRST EDITION

THIS country to-day is in the fortunate position of having recently experienced the lowest maternal mortality rate (1·92 per 1,000 live births in 1944), the lowest stillbirth recorded. Nevertheless, with more efficient doctors and midwives, with better homes and diet for the patients, with more regular work for their husbands, these figures could be notably reduced.

At present almost all general practitioners do some obstetrics. Many are not specially interested in it, and would be glad to be relieved of it. In Leeds in 1939 the average number of cases taken per doctor was under ten, all doctors not practising midwifery at all having been excluded before the calculation was made.

By reducing the number of general practitioners practising obstetrics, the number of cases taken by each, which is far too low, could be raised to a number which would give all those taking part in the service reasonable experience of the subject. Perhaps 25 per cent. of the total number of general practitioners might ultimately do obstetrics, if the birth-rate remains at its present level: in rural districts it would probably be necessary for all doctors to be on the obstetric panel.

It would be possible to ensure that these men and women are better trained than at present. They should all have at least six months' post-graduate experience in an obstetric department. It seems likely, if some of our plans bear fruit, that there will be many more resident posts in obstetric departments in a few years' time. The doctor who is to practise obstetrics should have adequate special training and be required to demonstrate that he possesses enough special knowledge by taking the D.Obst.R.C.O.G. This is an examination in obstetrics (not gynaecology) devised for the general practitioner.

To start the scheme, a panel of doctors wishing to practise obstetrics would be formed from the present practitioners, but any additions to the panel would consist

of men and women specially trained and qualified. These people would not be obstetric specialists : if the recommendations of the three medical Royal Colleges take effect, the post-graduate training of all specialists will as soon as possible take at least five years. The doctor practising obstetrics, if he takes the D.Obst.R.C.O.G., will have had a year's post-graduate training in general medicine or surgery, and six months in obstetrics as a minimum.

If these recommendations are carried out, obstetric work will be done by men and women who are better trained when they start, and who obtain a larger bulk of experience as each year goes by, than at present. This will go far towards satisfying the College of Midwives, which is anxious that only doctors with special midwifery experience should answer midwives' calls.

This small book, as the title states, deals only with management in obstetrics. It tends to be dogmatic : alternative treatment is not often described. It is not claimed that the lines of treatment described are beyond question the best : they are merely those in which I believe myself. I have tried to avoid assuming that hospital admission is available for every abnormal case.

Treatment of diseases of the new-born is not dealt with, but the management of breast-feeding and its difficulties, which are still a matter of interest to most accoucheurs, is described.

I am very much indebted to Professor Miles Phillips and Professor Albert Hemingway for much help and advice : to Mrs. Helen Heardman for supplying Appendices II and III : to Miss Clarke for supplying Appendix IV, and to my wife and many other friends for valuable suggestions about the subject-matter and chapter headings, not forgetting my wise and courteous publishers.

ANDREW M. CLAYE

November 1947

CONTENTS

1

ABORTION

Like ships that sailed for sunny isles
But never came to shore.

T. K. HERVEY, *The Devil's Progress.*

Care of abortions

ABORTIONS bulk largely in maternal mortality statistics. For the five years 1944–8 the percentage of the total maternal deaths associated with abortion was 16·6; for the next five years, 1949–53, it was 16·8. Most of the deaths are certified as being due to abortion with sepsis, though the excess of these over the cases in which sepsis is not mentioned is much less than it was ten years ago.

Hospital accommodation under the care of a gynaecologist is essential for cases of incomplete and septic abortion: too often their management is left in the hands of junior house-surgeons. These cases cannot be treated in clean maternity units, because many of them are infected. An adequate number of beds for them is needed in gynaecological departments. If the number is inadequate, curettage is liable to be carried out on the patient in order to get rid of her quickly, regardless of any additional risk to her.

Cases of threatened and habitual abortion should have ready access to maternity beds for investigation and treatment.

All the resources of a modern hospital may be needed in dealing with the various types of abortion, so that the A.B.O. and Rhesus grouping, Wassermann reaction, and bacteriological examination of swabs may be carried out if necessary; a blood bank and full operating facilities should be at hand.

When a patient is dealt with as an emergency, it must not be forgotten that when her acute condition has settled down, the cause of the abortion must be sought so as to prevent such a thing happening again, and it may be desirable a few months later to test the patency of the tubes.

Threatened abortion

It has long been recognized that the treatment of threatened abortion is far from uniformly satisfactory. Recently attempts have been made, with some success, to explain this.

As long ago as 1930 Streeter, of the Carnegie Research Institute, Baltimore, after studying 437 abortion specimens with their menstrual histories, concluded that " as a rule the dead foetus is retained about six weeks ". If this is so, then the pregnancy in a case that ultimately aborts has generally been beyond hope for six weeks before its expulsion. What happens towards the end of that time is usually the threat of casting off a *missed* abortion, and rest and sedatives are useless for treating this. The abortion may even be *incomplete* when the doctor is first called in, though the history suggests merely a threatened abortion. Colvin *et al.* (1950) have reported on a large series, 1,570, of threatened abortions, and are very sceptical about the value of hormone, oestrogen and progesterone, and vitamin therapy (C, E, and K have all been tried), which they stigmatize as costly, tiresome, and for the most part useless. Their cases were treated without hormones or special vitamins : they received only the vitamins every pregnant woman gets. There were 440 abortions in the series, a low figure, and of these 318 had blighted ova, either with an improperly formed embryo or none at all. A further 60 had abnormalities of the foetus (monsters) or secundines, such as circumvallate placenta or placenta praevia. This left only 62 abortions of unknown cause, or a maximum of 3·9 per cent. of the 1,570 who could have benefited from specific or any other therapy.

They also classified all their cases according to their previous obstetric performance, and found that the percentage of abortions in the current pregnancy did not vary to any great extent, whether the patients were primigravidae, or had aborted in all their previous pregnancies, or had gone to term in all, or had gone to term in some and aborted in others. In fact, the lowest percentage of abortions (22·7) in the current pregnancy occurred among

those who had aborted in every pregnancy previously, and this was 8 per cent. lower than those who had had a previously perfect obstetric history. Like the findings from examination of the aborted products, this points to the recurrent maternal factor being unimportant, and to a factor inherent in each ovum being responsible for the abortion. Now treatment by hormones and vitamins was designed to help the maternal factor, and could not possibly benefit the foetal factor.

They maintain that the type of bleeding when abortion threatens is of value in prognosis. They found that of the 1,001 cases where the initial bleeding was bright red, only 10 per cent. aborted, whereas of 452 cases where brown discharge was the first complaint 55 per cent. aborted, and half of these were blighted ova. However, as far as this last statement is concerned, it is at least as important to remember the corollary, that 45 per cent. did not abort, and that therefore complete pessimism is not justified.

Management

Instructions should be given to every patient on booking that if she has the slightest haemorrhage, **she must go to bed and stay there, saving everything she passes for inspection.** What we would like to know quickly and definitely when abortion is threatened is whether the pregnancy will continue. It is a question which seldom can be answered categorically " Yes " or " No " at the outset : the reply may and probably does depend to some extent on treatment. It is useful to have a Hogben test carried out as soon as possible : a morning specimen of the urine (six ounces) is needed for this. The test may remain positive for as long as 12 days after death or expulsion of the foetus, but a negative test indicates that there is not a continuing pregnancy *in utero*. Much disappointment to the patient and unnecessary confinement to bed may be prevented if the test sent at the onset of the bleeding is found to be negative ; it should be repeated later if there is doubt about what has happened since a positive report was obtained. Conservative treatment should be adopted until the report of the Hogben test is received. If it is

positive, there seems no reason to depart from the rule of rest in bed, as near absolute as possible, until a week after all fresh bleeding has ceased. An injection of morphine to calm anxiety at the onset is helpful, and an opiate mixture containing say seven minims of liquor morphinae hydrochloridi in a dose may subsequently be given three times a day. Purgatives are avoided : liquid paraffin can be taken regularly, and an olive oil enema may be given if essential. Pelvic examination, unless there is serious doubt about the diagnosis, should be limited to an examination of the vagina and cervix with a speculum, as in ante-partum haemorrhage. If the abortion is inevitable, the os will be open. It is doubtful whether correction of a retroversion during pregnancy is ever justified : it is least excusable when a patient is threatening to abort. If the Hogben test is negative, the condition under treatment is not a threatened abortion, and the routine can be relaxed.

A much laxer régime is advised by Colvin *et al.* (1950), but it is at any rate possible that their abortion rate would have been even lower had they been stricter. They do not allow for the view that the prognosis may depend in part on the treatment.

Inevitable abortion

Here the object of treatment is to assist the process of abortion.

It is not often necessary to operate on an inevitable abortion. The only indication for doing so is haemorrhage, and they seldom bleed heavily. If bleeding is severe, 0·5 mg. ergometrine should be given by a vein at once, and it can be repeated if necessary. Morphine (see Threatened Abortion, above) may be given.

The process is not always rapid, and may take several days.

Complete abortion

Keep the patient in bed for a week, or more, according to her general condition. The management is similar to that of the puerperium after labour.

Anaemia calls for treatment with full doses of iron, e.g. :

Tab. Ferri Sulph. Co. 3 gr. (0·2 gm.).

three times a day after food (see Antenatal Supervision, p. 16).

Incomplete abortion

The doctor may see what has been passed, and recognize that something is missing : more often the diagnosis is made on a history of continuous bleeding after abortion.

There may be :

1. Severe bleeding within a few hours of abortion.

The treatment of this type is surgical evacuation of the uterus. As with other cases of haemorrhage, treatment of its effects may also be necessary (see Resuscitation, Chapter 31).

2. Moderate bleeding after abortion.

Give 0·5 mg. ergometrine intramuscularly and repeat the dose in four hours if necessary. Usually the placenta is delivered within a few hours.

If on vaginal examination with the usual aseptic precautions, a mass is found in the cervical canal, it should be removed with the finger or sponge forceps.

If the placenta is not delivered within 24 hours, evacuation of the uterus under anaesthesia is carried out.

3. Slight prolonged bleeding.

Many patients come up giving a history of slight, almost continuous bleeding lasting for several weeks since an abortion. Curettage is indicated.

When there is a history of intermittent haemorrhage since abortion, with a gap of several days during which there is no bleeding, the uterus will almost certainly be found empty if curettage is done.

Evacuation of uterus

The external parts and the vagina are thoroughly swabbed with antiseptic : the pubes have been previously shaved.

In the recent cases the cervix may be so much dilated

that the finger can be introduced into the uterine body. It is the safest instrument and should be used whenever possible. After a catheter has been passed and a careful examination of the pelvis under anaesthesia has been made, the index finger gently curettes the endometrial surface. The surgeon's other hand over a sterile towel on the abdomen presses the uterus down to bring it nearer to the inside finger. Often there is considerable haemorrhage during the evacuation, and so it should be done carefully but quickly. One mg. ergometrine is injected into a vein at this stage. Ovum forceps are useful to remove fragments that have been already loosened by the finger.

When the operation is complete, the inner surface of the uterus is still not perfectly smooth. The operator should desist when all grossly projecting matter has been removed : otherwise he may tear away uterine muscle.

If there is not enough dilatation for introduction of the finger, the blunt curette is used. First a speculum (Sims') is introduced and a volsellum attached to the cervix. In fairly recent cases the preliminary use of dilators may be unnecessary, but in those of long standing the cervix will be found closed or nearly so. The dilators should be passed carefully with the tip directed towards the fundus uteri, i.e. forwards when it is anteverted, and backwards when it is retroverted, to minimize the risk of perforation.

The blunt curette is not a very efficient instrument. I use it to get my bearings inside the uterus, and then change over to a sharp instrument. The danger of perforation should be constantly borne in mind. All parts of the endometrial surface are stroked in turn, and special attention is given to the inside of the fundus.

If there is still any tendency to bleed, the uterus should be packed with gauze, the pack being left in for six hours. Morphine, $\frac{1}{4}$ gr. (15 mg.), should be given one hour before its removal, which is painful.

Septic abortion

This condition is usually met when the abortion is in the incomplete stage, but occasionally it is threatened, inevitable or complete.

The primary indication is to treat the infection ; operation is undertaken only on account of haemorrhage, as already mentioned.

A high vaginal swab is taken for aerobic and anaerobic culture. Pending the receipt of the bacteriological report, which will include a statement on sensitivities, various drugs are given ; penicillin 300,000 units twice daily, full doses of Sulphatriad (first dose 6 gm., followed by 3 gm., four hourly) with one drachm of potassium citrate in mixture at similar intervals to make and keep the urine alkaline. At least five pints of fluid every 24 hours should be taken. When the report arrives, treatment by the appropriate drug only is substituted.

In *Cl. Welchii* infection large doses of penicillin should be given. Ileus may call for treatment on the usual lines (intravenous glucose and gastric suction) and transfusion of blood may be needed. The worst cases have oliguria ; in transfusing remember that faultily matched or otherwise unsatisfactory blood may itself cause oliguria, and that these patients may readily be killed by excessive fluids.

On the subject of septic abortion A. M. Ramsay lays down that :

1. The most important principle in treatment is the control of the infection.

2. There is no need to carry out a routine removal of retained products under general anaesthesia in every case.

3. Removal of retained products in this way seldom exercises any beneficial and may indeed exert an adverse effect on the course of the infection, because the manipulations may break down the natural leucocytic barrier.

Missed abortion

Here the foetus has died, but has not been expelled. First be sure that in fact the foetus is dead. Clinical signs and even radiology may mislead, and it is a tragedy to deliver alive a supposedly dead child at perhaps 28 weeks. The biological test should be reliable, but no investigation should be omitted. Patients often think that the presence of the dead foetus *in utero* will be harmful

to them : however, infection virtually never occurs. There is no urgency about the expulsion of the uterine contents. At a variable period, days, weeks, or rarely months, after the death of the foetus, it is passed.

If the patient is anxious to be rid of it soon, a medical induction can be carried out. Large doses of stilboestrol may be given (5 mg. every hour for several days if necessary), and if these fail patience should again be advised. The only possibly serious effect while a dead foetus is being retained is that the patient cannot conceive again.

If the patient is still very anxious to be rid of the foetus, evacuation of the uterus may be carried out on the lines already described. Preliminary dilatation with laminaria tents may be necessary.

Habitual abortion

What is habitual abortion ? Eastman (1946) has estimated that if 10 per cent. of all pregnancies end in spontaneous abortion, 9·6 are due to a random factor, 0·4 to a recurrent factor. As already stated, Colvin and his co-workers consider the recurrent maternal factor insignificant. Most authorities agree not to speak of " habitual " abortion unless three consecutive pregnancies have so ended, and this is the meaning in this chapter unless specially indicated.

In the investigation of a patient complaining of habitual abortion, a comprehensive examination is made to exclude general disease which may be responsible such as chronic nephritis, essential hypertension, diabetes or syphilis. In chronic nephritis and hypertension little can be done to check the tendency to abort and it is not often desirable to do so, but adequate treatment of syphilis produces excellent foetal results, and diabetes when it is stabilized no longer tends to cause abortion.

Local abnormalities such as fibroids may be responsible, though their removal is not always followed by better obstetric results. There is a much higher incidence of retroversion among habitual aborters than among control series of 100 parous and 100 nulliparous women, but operative treatment with the object of preventing abortion,

as with fibroids, does not produce uniformly good results (Javert, Finn and Stander, 1949). Four out of 12 pregnancies occurring after myomectomy, and 5 out of 16 occurring after suspension, ended in abortion. Less common local causes are double uterus and previous high amputation of the cervix.

Intensive treatment with oestrogen and implantation of progesterone pellets both have their advocates in the treatment of habitual abortion without obvious cause, but at present scepticism is the prevailing note regarding hormones. Swyer and Daley, in a series of 113 women who had had two or more abortions before the current pregnancy, found that there was no significant difference in the number of live babies produced between a group which received a progesterone implant and another of similar size which received no specific therapy. Recent papers suggest that vitamin E has little or no value in treatment of the human being.

Bevis in this country and Javert, Finn and Stander in the U.S.A. have stressed the importance of allaying worry and instilling confidence. Many emotionally unstable women are met with among the childless. Anxiety may be responsible among other things for nausea and vomiting, which may create or intensify a deficiency in diet. These patients are allowed to associate with each other in the clinic, and the improvement in their morale as they see their fellows progressing towards term is striking.

It is common practice to make women lie up at the time of their suppressed periods ; this is a measure which has been repeated from book to book and it is doubtful in the extreme whether there is any sound basis for it.

Two pieces of evidence against the view that abortion is more likely to occur at these times may be cited. Streeter (1930) found that in abortion the foetus is generally retained for six weeks after its death. Browne, Venning and Henry (1950) state that the commonest day of onset of abortion in 500 cases was day 80, and that there is a sharp drop in incidence before and after this. If the risk is greatest at the times the periods would have been due, one would have expected peaks at days 28, 56 and 84.