OBSTETRICS IN GENERAL PRACTICE

Operative Obstetrics in General Practice

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Since the Royal College of Obstetricians was founded in 1929 the practice of obstetrics has gradually evolved and has increasingly become a specialized field. More hospitals and their staffs have been upgraded, and, with the development of comprehensive maternity services throughout the country, more and more patients are booked for hospital confinement. The demand for hospital confinement is therefore still on the increase, resulting in a marked decline in the number of domiciliary confinements and of the obstetric complications that face the practitioners in the home.

Twenty-five years ago, during the early days of the maternity service in this area, the author would venture forth on emergency domiciliary calls (Flying Squad calls) to deal with impacted breech deliveries, failed forceps, transverse lie, and other complicated conditions—but, alas, soon to learn that what can be done proficiently in the home is very limited.

With an average national birth rate of 17.4 per 1,000 it is estimated that a practitioner with a list of 2,500 patients is likely to have 43 pregnant women in his practice per annum. Of these, approximately 60% will almost certainly be hospital confinements, so that of the 17 who remain for home confinement very few will develop any complications. Even with a forceps rate in the upper limit of 20% he should therefore expect no more than three forceps deliveries per annum.

In one of our larger peripheral general-practitioner maternity homes, with an average of 266 births per annum, only 10 forceps deliveries are undertaken each year. Under similar conditions the forceps rate in general practice will be equally low.

Therefore it is proper in a paper such as this to confine discussion to those unexpected conditions that occur in the home and which can be dealt with by the practitioner.

These are:

- (1) Overcoming delay in the second stage by
 - (a) Episiotomy with local analgesia.
 - (b) Low forceps delivery under pudendal nerve block.

FIG. 1.—Episiotomy scissors.

- (2) Abnormalities in the third stage necessitating manual removal of the placenta.

Delay in the Second Stage

Episiotomy Under Local Analgesia

No woman should be allowed to be in the second stage of labour for more than two hours, but there cannot be an arbitrary time limit. Much more relevant than the time factor is the rate of descent of the head and the progress of its

FIG. 2.—Labat syringe and needles.

passage over the perineum. Never should the head be left pounding upon the perineum, for this is a sure sign that it is being held up—and this is the time for action. An incision in the perineum early enough, before the mother and foetus have become exhausted, will shorten the second stage and reduce the need for forceps.

This minor operation can be done after infiltration of the perineum with a local analgesic. The analgesic used can be one of the many products on the market, but those proved satisfactory are procaine hydrochloride 1% and lignocaine

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hydrochloride 1% ("xylocaine"). The instruments necessary will be: episiotomy scissors (Fig. 1); 5 in. (12.7 cm.) toothed dissecting forceps; needle holder, curved cutting and round-bodied needles (size $1\frac{1}{2}$ in. (4.7 cm.)); two or three small artery forceps and sponge forceps; and if possible a Labat syringe and needles (size 3 in. (7.6 cm.) $\times$ 0.8 gauge and 1 in. (2.5 cm.) $\times$ 0.6 gauge) (Fig. 2), but any 10 or 20 ml. syringe can be used.

With the patient in the lithotomy position, first make a small weal (Fig. 3 i) with the local analgesic in the midline at the fourchette and then infiltrate an area $1\frac{1}{2}$ –2 in. (3.8–5.1 cm.) directly lateral to this point on each side (Fig. 3 ii). From a point at 7 o'clock send the needle downwards and outwards towards the right, and while doing so gradually infiltrate the subcutaneous and deep tissue with the local analgesic used, to a point reaching approximately midway between the anus and the tuber ischium (Fig. 3 iii), using about 10 ml. A similar area is infiltrated on the left side starting at the 5 o'clock position. With both sides infiltrated in this way the perineum

FIG. 3.—Infiltration with local analgesic.

FIG. 4.—Episiotomy incision.

becomes analgesic and the patient will not feel the pain of its distension. This in turn leads indirectly to more muscular relaxation.

With the patient bearing down, an incision is now made (Fig. 4) with episiotomy scissors. The best incision is medio-lateral, commencing at the fourchette, directed backwards and to one side, and extending to a point midway between the anus and the ischial tuberosity. This incision cuts through skin, muscle (being lateral it avoids the sphincter ani), and vaginal wall, and is more easily made on the right side. The episiotomy incision will relieve the perineal obstruction and the head will be quickly delivered.

This type of procedure can be easily carried out in the home provided the instruments have been prepared by the nurse during the progress of labour. Not only does this shorten the second stage but it also obviates overdilatation of the perineum, by prolonged manœuvring of the head over the muscular floor. Such a prolonged process can result in pelvic

floor weakness. A properly carried out episiotomy and repair safeguards the patient against such a sequela.

After completion of the third stage the cut surfaces will be revealed, and these should now be sutured. The vaginal wall is sutured with interrupted catgut (No. 1 plain) on a round-bodied needle, as far as the fourchette. The muscles are then sutured with No. 1 catgut and then the skin with linen thread or braided nylon. Simple through-and-through sutures in the perineum are inadequate; suturing layer by layer must be carried out.

It should be added that other perineal tears that may occur with normal deliveries can be sutured in the same way after local infiltration of the area with adequate local analgesic. Extensive tears such as those of third degree, where the sphincter muscles and anus are involved, must be dealt with in hospital.

Low Forceps Delivery Under Pudendal Nerve Block

The indications for forceps delivery are:

- (1) Delay in the delivery of the head where an episiotomy is insufficient.
- (2) The onset of foetal distress.

It is safer, however, to limit the use of forceps in the home to cases with the head below the level of the ischial spines and visible at the vulva. Even then one should make sure that the visible part of the head is not, in fact, due to excessive moulding and caput formation. In such cases part of the head can still be felt abdominally, and attempts at delivery of these at home should be avoided.

Forceps delivery in the home is the simplest of operations, and for this purpose it is wise to use only the lightest and smallest instrument. There is none better than Wrigley's forceps (Fig. 5), which is light, small, and short, thus minimizing trauma by preventing the accoucheur using undue force.

FIG. 5.—Wrigley's forceps.

Having already made certain that the head can be delivered easily, and that the bladder is empty, place the patient in the lithotomy position. Infiltrate the perineum as for an episiotomy, and in addition both labia (Fig. 6 i) with 5 ml. on each side—this subcutaneous infiltration commencing at the perineum and reaching just beyond the level of the clitoris.

If it is now decided that forceps delivery is necessary, the pudendal nerve is blocked as it crosses the ischial spine. This is not difficult to learn, and from personal experience I have found that the following technique is easily carried out.

A 5 in. (12.7 cm.) needle (0.9 gauge) is passed through the skin at a point 1 in. (2.5 cm.) from the fourchette at a 5 o'clock position (Fig. 6 ii).

The long needle is pushed into the deep tissue and is guided just deep to the vaginal wall by the finger of the left hand in

the vagina. In this way it can be directed towards the ischial spine, which can be felt through the vagina, between uterine contractions.

When the point of the needle has reached the region of the ischial spine the plunger is slightly withdrawn to exclude the possibility of having punctured the pudendal vessels. About 5 ml. of the solution is then injected around the area of the ischial spine. The needle is then gradually withdrawn and at the same time the solution is infiltrated into the deep tissue to a total of about 3 ml. The same procedure is adopted on the other side, commencing at the 7 o'clock position.

When the head is visible and in an antero-posterior position, the forceps can be applied quite easily. The left blade is first guided into position by the fingers of the right hand from the 5 o'clock position (Fig. 7) and gently moved on to the lateral aspect of the head. The right blade is similarly applied, guided by the fingers of the left hand commencing at the 7 o'clock position (Fig. 8). When both are in position they will easily lock (Fig. 9a). An episiotomy incision is then made as described.

The use of local analgesia and pudendal block avoids all the risks of general anaesthesia, and the operator can approach the delivery without hurry and anxiety—he has only to concentrate on one end! Because forceps delivery at home should be an outlet forceps, a general anaesthetic is never necessary, thus avoiding one of the most serious risks to the mother. Local analgesia and a pudendal nerve block is adequate and allows the operation to be carried out slowly, gently, and precisely.

After application of the forceps the patient will continue to bear down with each contraction, and the direction of the move-

ment of the forceps under such straining will guide the operator as to the correct line of traction necessary.

Standing sideways, with the left hand (Fig. 9b) gently pressing on the shank of the forceps towards the perineum and the right hand used for gentle traction, delivery is facilitated with the minimum of force.

After delivery of the child and placenta the episiotomy incision is repaired as previously described.

Manual Removal of Placenta

Retained placenta can, to a large extent, be eliminated by prophylactic administration of ergometrine, 0.5 mg. intravenously, or "syntometrine," 1 ml. (1 ampoule contains oxytocin 5 units and ergometrine 0.5 mg.) intramuscularly. The injection should be given at the time of delivery of the anterior shoulder, especially in cases of forceps delivery. This ensures early contraction and retraction of the uterus, resulting in early expulsion of the placenta. This technique should be generally adopted as a recognized prophylactic measure against post-partum haemorrhage in the home, where blood transfusion is not readily available. In addition, it would be a wise precaution if all practitioners undertaking obstetrical work carried in their bag a bottle of dried plasma and adequate solvent in the form of sterile water. These, with the standard giving sets, are readily available free at their area blood transfusion centre, and would be an added safeguard to the practitioner against an unexpected and sudden haemorrhage. Administration of plasma would minimize the degree of shock pending the arrival of the Flying Squad.

FIG. 6

FIG. 7

FIG. 8

FIG. 6.—Infiltration of labia and pudendal nerve. FIG. 7.—Insertion of left blade of Wrigley's forceps. FIG. 8.—Insertion of right blade of Wrigley's forceps.

FIG. 9a

FIG. 9b

FIG. 10

FIG. 9a.—Blades in position and locking. FIG. 9b.—Technique of traction. FIG. 10.—Manual removal of placenta.

Manual removal of the placenta is an operation that should normally be carried out in hospital, where full facilities are available for transfusion and resuscitation, or it should be undertaken by the Flying Squad team, who will have available equipment for such an operation.

However, it must be remembered that in any surroundings post-partum haemorrhage is much more serious and dangerous to the patient than the operation of manual removal of the placenta. It may therefore, in certain circumstances of severe haemorrhage, be safer for the practitioner to do this at home rather than risk prolonged bleeding with its resultant shock and later sequelae. When such haemorrhage occurs after a low forceps delivery at home, then no general anaesthetic will be necessary. Under the continued effect of the pudendal block the whole right hand can be introduced into the vagina and passed through the dilated cervix into the uterine cavity (Fig. 10).

When the edge of the placenta is reached the tips of the fingers then gently separate this edge, and in this manner the placenta can be gradually peeled off the uterine wall—this manoeuvre being controlled with the left hand firmly grasping the fundus. In this way the placenta can be dislodged and grasped within the hand, and with a combination of fundal compression and traction from within the uterine cavity, the placenta is removed. An intravenous injection of 0.5 mg. ergometrine or an intramuscular injection of syntometrine is necessary at this stage.

It should be emphasized that the longer the placenta is retained, the more likelihood is there of post-partum haemorrhage. It therefore follows that it may be advisable as a routine

after forceps delivery to remove the placenta manually, if it has not separated and been delivered within 15 minutes of the birth of the child. Complications in the third stage are more likely in the cases where it becomes necessary to deliver by forceps, whereas a normal delivery of the child will usually be followed by a normal third stage.

In the event of a practitioner being called by a midwife to a case of retained placenta then the problem of manual removal becomes more difficult. In such cases either the placenta is adherent or it is being retained by an hour-glass constriction of the uterus. Blood loss varies, but to remove the placenta necessitates relaxing the now contracted uterus. These cases should not be dealt with at home without both transfusion and general anaesthetic service. They should be treated by the Flying Squad service or in hospital after resuscitation at home.

Only in cases of extreme sudden haemorrhage should the practitioner embark on manual removal without means of resuscitation being at hand.

There is no other obstetric operative procedure that need be carried out in the home. The undiagnosed breech should certainly be identified during labour, thus allowing ample time for transfer into hospital, as would be the case in all other malpresentations. Operative procedures in the home, therefore, are becoming less frequent; the aim of management is normality by careful selection of cases.

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TO-DAY'S DRUGS

Nortriptyline

This drug is marketed under the names of "allegron" (Dista Products) and "aventyl" (Eli Lilly).

Chemistry

The compound nortriptyline is 5-(3-methylaminopropylidene) 10, 11-dihydro-5H-dibenzo (a,d) cycloheptene, given as the hydrochloride. Its chemical similarity to amitriptyline, from which it differs by one methyl group, is clear from the Fig.

Pharmacology

Among the pharmacological actions of nortriptyline on the nervous system animal studies have pointed to (1) an anti-

cholinergic effect; (2) a central depressant effect; (3) an anti-reserpine action; (4) stimulant as well as depressant behavioural effects. The degree of toxicity appears to be low. Very little has been reported about the normal human pharmacology of the drug.

Indications

Although the manufacturers assert that nortriptyline, as a "potent multi-phasic psychotrope" ("allegron") and a "wide spectrum mood enhancer" ("aventyl"), is therapeutically effective in a number of psychiatric conditions, most interest attaches to the claims for its value in the treatment of morbid depression and anxiety and to its relative status *vis-à-vis* amitriptyline in view of the close structural affinity. The clinical reports so far available are inconclusive on both counts.

It is not, for example, sufficient to learn from a manufacturer's report that "The total over-all response was satisfactory in 79% of 1,783 patients classified according to psychiatric diagnosis" or that "The over-all response was satisfactory in 1,267 (74%) of 1,718 patients classified according to symptomatology." Without the data from the numerous "personal communications" mentioned such claims cannot be evaluated. Among the few published reports that of Oltman and Friedman,¹ which compared the response of 50 depressed women to that of 180 patients treated with three other antidepressants, did not demonstrate a statistically significant difference.

¹ Oltman, J. E., and Friedman, S., *Amer. J. Psychiat.*, 1963, **119**, 988.