

Prolonged Labor

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SUMMARY

Dystocia is usually the result of inadequate uterine contraction or slow cervical dilation or both.

Some conditions causing these deficiencies are large size of the infant, multiple pregnancy, hydramnios, faulty presentation (particularly the occiput-posterior), occluding tumors, fullness of the bladder, umbilical cord impediment, concealed uterine hemorrhage, clamping of a thick anterior cervical lip by the infant's head, adhesion of the membranes to the cervix, or delay in rupture of the membranes. Dystocia is often observed in patients with hypopituitarism. A nervous, worrying temperament may seriously affect the progress of labor.

Maneuvers that are helpful in many of these difficulties are described and the indications and dosages for Pitocin® are presented.

DYSTOCIA, one of the greatest obstetrical problems, is quite common. It occurs for the most part in primiparous women. In the author's experience most women who have prolonged labor at the birth of a first child have a much shorter period of labor at subsequent deliveries.

Usually dystocia results either because contractions are short and weak, with long intervals, or because the cervix, whether firm and rigid or soft and apparently normal, dilates slowly. In some cases both sets of circumstances are present. Some fundamental facts must be remembered for the understanding of these difficulties:

1. Delivery of an infant includes three stages—descent, dilation, and expulsion—any one or all of which may be prolonged or slow. Ordinarily the head is engaged from two to four weeks before term and descent is thus begun. As the cervix gradually dilates, the head usually continues to descend; after full dilation of the cervix and rupture of the membranes expulsion occurs. In some cases, however, the head is engaged only lightly, or not at all, until full dilation is accomplished or until the membranes have been ruptured.

2. The cervix cannot dilate until it has something coming down into it, over which it can retract and thus help stimulate uterine contractions.

3. If the uterine musculature is overly stretched, it cannot contract as frequently, as long and as forcibly as it could otherwise.

In light of these factors, it is well to consider certain conditions which prevent or retard the descent of the head and may lead to inadequate contraction. (The special problem of contracture of the pelvis will not be discussed in this presentation.)

A large baby may distend the uterus so that contractions are weak and infrequent and the descent and expulsion of the head are slow. Multiple pregnancy and acute hydramnios may have a similar effect.

Faulty presentations, such as face, brow, transverse, occiput-posterior and breech, frequently result in long, difficult labor. Of these, occiput-posterior presentation is the most common and will be discussed in detail later.

Tumors such as fibroids, ovarian and parovarian cysts, and also the other cornu of a bicornuate uterus, may so completely block the pelvis that cesarean section is necessary. A tumor is sometimes not discovered until late in labor.

A full bladder in the mother may interfere with descent of the baby's head. The author has observed several cases in which the head, after it was well into the pelvis, gradually was pulled so far back out of the pelvis by increasing distention of the bladder that it hardly could be felt upon rectal examination. Hence the bladder of a patient in labor must be kept empty, with the aid of a catheter if necessary.

A short umbilical cord or one that is around the neck may tend to hold back the head in the second stage and prevent its expulsion. It is therefore important to listen to the fetal heart after every second or third contraction in the second stage in cases in which the head is slow to advance; and the physician must be prepared to carry out forceps delivery if there is evidence of fetal distress.

Hemorrhage into the uterine wall, as in abruptio placentae with concealed hemorrhage, may also affect the efficiency of the contractions.

DEALING WITH NERVOUS PATIENTS

Women of certain types frequently do not have good contractions. Short, fat women with hypopituitarism are likely to have difficulty, as are nervous, temperamental, worrying women.

A patient of the latter type may be so tense and nervous that the cervix is apparently spastic and remains contracted because of this nervous control. Often when such a patient is given sedation to relax nervous tension the cervix will dilate rather rapidly. Some patients may repeatedly demand medication to relieve pains before labor is really well begun; but early medication usually prolongs labor. These women can be helped most by psychosomatic treat-

ment. If they can be talked to and encouraged to stand the pains until the cervix is dilated about three centimeters, medication then can be given without unduly slowing labor.

The use of Pitocin® may be advisable to stimulate labor in patients with weak, infrequent pains. This aspect will be discussed later.

In so-called cervical dystocia, labor is prolonged by slow cervical dilation. If the cervix is long and narrow, as it is in many cases of premature labor, it may take hours to efface and dilate. The physician can usually do nothing in such cases but wait.

Often a thick anterior cervical lip, which gets stuck between the symphysis and the head, holds back the head and becomes more edematous as labor goes on. If this occurs with the head or the breech high in the pelvis, if the baby seems unusually large and if the edema increases while the cervical dilation does not progress, disproportion should be suspected and cesarean section carried out. The thick anterior lip is observed usually in multiparas and usually when the cervix is dilated to six or eight centimeters. If the head is deep in the pelvis, the physician can easily push this cervical lip up over the head during a uterine contraction, keeping the palm upward and pressing firmly against the cervical lip with the index and third fingers while the other hand is pressed down on the fundus in order to keep the head deep in the pelvis. This maneuver can often be completed during one contraction but the pressure may have to be repeated during seven or eight contractions.

ADHERENT MEMBRANES PREVENTING DILATION

Another situation less frequently encountered is that in which the cervix effaces but does not dilate to more than one-half to two centimeters. It may be so thin that it is not palpable on rectal examination. The patient is usually in good labor, yet the cervix remains the same despite good contractions. In these circumstances vaginal examination should be done; it will probably be found that the membranes adhere so closely to the cervix as to prevent dilation. If the finger is passed around the cervix, separating it from the membranes, the cervix then may immediately dilate up to four to seven centimeters and labor proceed normally. It is usually best to rupture the membranes at the same time. In one case the author had to stretch the cervix with a Mayo clamp in order to make an opening large enough for insertion of the finger; when the membranes were separated from the cervix it readily dilated to four centimeters and labor proceeded quite rapidly.

If the membranes do not rupture normally they may prevent the head from descending through the cervix. This occurs usually in a multipara or with occiput-posterior presentation. The cervix may remain for several hours dilated to six or seven centimeters; the head is usually in mid-pelvis, the contractions are inadequate, and on rectal examination the cervix feels soft and seems to stretch very easily.

Rupture of the membranes usually causes the head to descend immediately to the perineum and through the cervix. If the contractions do not improve immediately, Pitocin may be needed.

Similar treatment may be necessary in cases in which dilation is so slow that after 24 to 36 hours it has progressed to only three to eight centimeters. Often when the patient has been so long in labor the contractions are weak and only five or six minutes apart. If the baby is not too large, if the head or breech is deep in the pelvis, and if the dilation is at least five centimeters, it is fairly certain that the patient will deliver vaginally. The membranes should be ruptured and Pitocin administered intranasally in four to eight doses of 0.5 cc. once every half-hour. Usually good contractions will begin, the cervix will dilate and delivery will follow, with or without the aid of forceps. Very rarely it may be necessary to dilate the cervix with every contraction, taking one or two hours before dilatation is complete. If the patient is very tired, nervous and tense, one of the barbiturates or a stronger drug like Pantopon® or Demerol® may be used to relax her and give her a little rest, after which the cervix often will dilate fairly rapidly.

The procedure described for pushing a thick anterior lip over the baby's head may also be applied to speed slow labor, with forceps used if necessary to complete the delivery. The procedure may be used also to speed delivery in such emergencies as hemorrhage, convulsions, and fetal distress.

If the presenting part (head or breech) remains high and especially if the baby seems large, cesarean section is probably advisable, especially if there is no sign of progress after the membranes have been ruptured or Pitocin has been administered.

The previously discussed features of weak, infrequent contractions and incomplete dilation are often associated with occiput-posterior presentation. Usually if the cervix is slipped over the head with the fingers the head descends immediately to the perineum, rotating at the same time to an anterior position. If it does not rotate properly, however, it may be rotated in the following manner, which is applicable whenever the head is in posterior position:

With the right occiput posterior, stand on the patient's right side and insert the index finger of the right hand into the vagina to identify the posterior fontanelle. Press on the small ridge formed by the left parietal bone overriding the occipital (the lambdoid suture), forcing the head upward, anteriorly and to the right. At the same time press down on the fundus with the left hand to keep the head deep in the pelvis. The head can often be turned in one or two contractions but 15 or 20 may be required if the head is large or tight in the vagina. No attempt should be made to turn the head until it is well below the spines.

Pitocin should preferably be administered intranasally at first in all cases. If there is no effect, it may then be given intramuscularly. The usual intranasal dose is 0.5 cc. every half hour for not

more than eight doses. Sometimes normal contractions will follow even the first dose, although in other cases two or three series of eight doses, separated by six- to eight-hour intervals, may be necessary. Some patients may need an occasional dose to keep labor going well. If the cervix is fully dilated and there is no response to intranasal dosage, one minim of Pitocin may be given intramuscularly, every 15 minutes if necessary. The dose may be increased to two, three or even four minims every 15 minutes. Seldom are more than three or four intramuscular doses required.

Estrogenic injections are given in many cases, in two or three doses of 20,000 to 40,000 units each during the course of long labor. The estrogens are believed to be helpful in stimulating contractions of the uterine musculature.

The cervix is often lacerated on one or both sides during such procedures as dilatation or pushing the cervix over the baby's head. Indeed, it is often lacer-

ated after normal labor in which it has not been touched. Despite the statements in textbooks, the lacerations almost never bleed; the author has observed only two instances in which suturing was necessary because of bleeding. The cervix should always be inspected after delivery, whether labor was prolonged or normal, and even lacerations no deeper than one-half centimeter should be sutured. The cervix can be easily exposed by the use of anterior and posterior vaginal retractors. The anterior cervical lip is then grasped with a sponge stick at the 12 o'clock position. With this as an anchor, the cervix can be exposed serially by alternately grasping and releasing with two other sponge sticks around the entire circumference. Any laceration can be easily sutured by grasping the cervical lip at each side of the laceration with a sponge stick and starting a continuous suture high up at the apex of the tear.

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