ANTE-NATAL CARE AND SOME COMPLICATIONS OF LABOUR

BY

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It is commonly understood that the first stage of labour begins with the establishment of uterine contractions. It would, however, be of greater benefit if it were considered that this stage began during the last few weeks of pregnancy, with the formation of the lower uterine segment and a slow moulding and repositioning of the presenting part into the most acceptable pelvic position. At this time there arise also in the patient's mind those vague doubts and fears which, if not allayed, may influence injuriously the course of labour. It is during these latter weeks, too, that many fundamental decisions are made and skilled guidance given which will have a profound effect on the ultimate labour.

Pelvic Measurements

It is well to obtain a mental picture of the physical and sexual development of the patient before beginning the examination of the pelvis. A short, squat figure and absence of femininity often reflects a similar lack of female characteristics in the bony pelvis and may be associated with indifferent pains at parturition. Knowledge of the external pelvic measurements alone is of little value, and the teaching that the foetal head is the best pelvimeter is but partially true. There are cases with normal external measurements in which internal examination may reveal a jutting sacral promontory or undue prominence of the ischial spines. Again, cases are seen in which the foetal head cannot be made to engage in the pelvis although an easy labour may ensue, or in which the head may engage but labour be prolonged and even difficult. If a foetal head passes through the pelvic inlet it should likewise, in the great majority of cases, pass through the outlet. Yet experience shows that many such cases are liable to end in stillbirth. Minor degrees of pelvic contraction, while permitting delivery, may so delay descent, or initiate uterine inertia, that there is a prolonged and dangerous compression of the foetal head. It is only by means of a careful examination of the pelvic cavity and outlet that such difficulties can be foreseen. Routine internal examination educates the fingers to the normal pelvic roominess and permits estimation of the available space in the anterior and posterior segments of the pelvic straits, so that when any abnormality is encountered it is readily appreciated.

Gauging the width of the subpubic angle is difficult and requires practice, but the posterior segment can readily be measured. The method of Caldwell and Molloy is preferable to that of the estimation of the posterior sagittal diameter. In the former the distance between the sacrum and the ischial spine is measured along the sacro-spinous ligament, and in the normal female pelvis this should accommodate three fingers. With a normally curved sacrum a shorter measurement here suggests a small sacro-sciatic notch conforming with that found in the male type of pelvis, in which delay of the head at the outlet is liable to occur. When, as often happens with this kind of pelvis, the head has engaged in a posterior position, the narrowing outlet may lead to a failure in rotation and result in the typical deep transverse arrest of the foetal head. The smallness of the subpubic angle also leads to outlet delay; the occiput finds difficulty in slipping below the pubic arch, and if the perineum is firm an episiotomy or the application of forceps to the low-lying head will be necessary.

Position of the Foetal Head

A careful palpation is made of the abdomen to reveal the position of the foetal head. In the majority of cases

it will be found lying in the transverse diameter of the pelvic inlet with the occiput to one or other side, and in patients with a normal pelvis and development no difficulty is to be expected at parturition. A posterior position of the occiput, on the other hand, is sometimes associated with an abnormal pelvis, and especially one with male tendencies. At one time Buist pads were used to induce an anterior rotation of the occiput, and Herman practised an external rotation of the head and body. Such methods, however, are neither sufficiently successful nor are they always indicated; in certain types of pelvis it is normal for the head to descend in a posterior position. If immediate correction is undertaken it is usually found at the next ante-natal examination that the foetal head has reverted to its previous position. The majority of cases ending as they do successfully for mother and child, are hence at this stage best left alone. When in the absence of pelvic abnormalities or tumours the foetal head is found, in the latter weeks of pregnancy, in an abnormal position—in the fundus or iliac fossa—and, being corrected, persists in moving away from the lower pole of the uterus, a low insertion of the placenta may be suspected. Such patients may well be treated on the lines of those suffering from ante-partum haemorrhage and be admitted to hospital for the appropriate investigations.

The Non-engaged Head

There is no manoeuvre better suited for demonstrating whether a non-engaged head will or will not enter the pelvis than that used by Fahmy. With the index finger and the thumb exerting pressure upon the occiput and sinciput respectively the patient is asked to sit upon the examination couch. On doing so unaided her abdominal muscles tighten, often pressing the foetal head into the pelvis. If, however, the head does not descend with digital pressure, as may happen in the patient with an increased pelvic inclination, an additional manoeuvre can be attempted. The patient is made to lean as far forward as possible, relaxing the abdominal muscles and thereby enabling the uterus to fall more into line with this less vertical axis of the pelvic inlet. Then digital pressure often causes the head to enter the pelvis with an ease and spontaneity which is at once surprising and comforting; any overlapping of the foetal head on the symphysis pubis is readily appreciated at this time by the palm of the examining hand, which can feel simultaneously the foetal head and the pubes.

Some of the cases of non-engagement of the foetal head left to have a trial labour belong to the class with increased pelvic inclination. The quick descent of the head which is so often seen after rupture of the membranes in these cases can be understood. The head resting uneasily upon the pelvic brim when labour starts allows the liquor amnii freely to escape below it with each contraction; there is therefore in the early stages of labour a failure of descent of the foetal head. The bag of waters meanwhile allows of a slow taking up of the cervix, but as soon as the external os begins to dilate there is the risk of rupture of the membrane. With the membranes ruptured the uterus is able to push directly on the foetus, usually causing the head to enter the pelvis in the position of anterior asynclitism. Good contractions and the direct pressure of the foetal head allow the thin lower uterine segment and the os to be pulled up and dilated.

The Patient's Mental Attitude

There is no physiological process in which the mental attitude of the patient exerts a more profound influence than during pregnancy and labour. Its effects in inducing pathological conditions and serious mental disturbances are well known, and it is equally important to recognize the physical effect this mental attitude can produce in relation to the actual birth of the child. There is no greater error than to omit to treat, especially in primigravidae, incipient fears and misgivings. Furthermore, a

system whereby ante-natal care and parturition are considered as two different processes, or where there is separate control over these two periods, is greatly to the disadvantage of the accoucheur and the patient. The mental influence on the course of labour may be considered in relation to (a) the prolongation of labour and (b) abnormal labour.

The relative increase in the number of primigravidae has brought into prominence the nervous type of patient, who is restless and apprehensive, and with whom a long first stage of labour is common. With an increase, too, of later child-bearing, the elderly and nervous primigravida is more often encountered. Of a series of 350 primigravidae with normal pelves recently investigated, following a full-term pregnancy, it was found that 295 were below 30 years of age, and with them the first stage of labour had an average length of 14.75 hours; for the fifty-five primigravidae over 30 years of age the average length of this stage of labour was 20.5 hours—a finding which must have some bearing on a foetal and neo-natal mortality of 5.8 per cent. in the former group and 9.1 per cent. in the latter. The nervous primigravida is easily recognized at the ante-natal clinic, and special care should be taken to reassure her concerning the outcome of labour; while to the elderly patient it may well be explained that labour, if slightly longer, will still be taking a normal and expected course. Slow dilatation of the os uteri in these cases may best be treated by allaying the patient's fears, and the administration of morphine and scopolamine or large doses of bromide and chloral hydrate.

There are cases in which the first stage of labour proceeds along its slow way for several days. This delay is a serious complication and one which is liable to end with foetal death and maternal morbidity. Two distinct and clearly differentiated groups of cases may be recognized: (1) those in which uterine inertia is present; and (2) those in which there is spasm or non-relaxation of the external os.

Uterine Inertia

Uterine inertia is a condition so full of potential dangers that, to avoid it, many obstetricians give quinine bihydrochloride, 2 grains three times a day, to all primigravidae during the last two weeks of pregnancy. Attempts to justify, by controlled observation, the use of this substance have been made, and although there is as yet no final proof, most clinicians are convinced of its value. In the type of case found at the ante-natal clinic to be excitable and introspective a course of this treatment may well be advised. During the progress of labour the patient should be kept quietly in a separate cubicle or first-stage room, where she will be saved the worry of watching other women more fortunate in labour. The general strength should meanwhile be maintained, and provided that the membranes are intact the prognosis remains good. The spontaneous return of uterine contractions is hoped for, and heralds as a rule a satisfactory progress to delivery. The use of pituitary extract in small doses (2 units half-hourly for four doses) may initiate uterine contractions, but should be given only if the close attendance of the accoucheur is possible.

In the uncommon cases in which there is non-relaxation of the external os the uterus is active, often excessively so, and slight, frequently recurring pains, to which the patient is specially sensitive, are present; the foetal head is usually low in the pelvic cavity. The true condition, however, is revealed by vaginal examination; the cervix is found completely taken up, but with the external os only one or two fingers dilated and stretched, parchment-like, over the foetal head. The cervix under these conditions either completely resists or tears with manual dilatation. The usual treatment is to give morphine. Stimulants such as pituitary extract have no effect in producing the cervical relaxation, and their use may be dangerous. There is still, unfortunately, the occasional

recalcitrant case in which morphine is given too late or fails to act, so that the condition may persist for several days. The method usually employed for such a case is to make incisions in the cervix, as described by Dührssen. The alternative and perhaps easier method of treatment, however, is to give a spinal anaesthetic and then manually dilate the cervical os, according to the method of Delmas, and proceed to deliver the child with forceps. The readiness and the ease with which the resistant os becomes relaxed under spinal anaesthesia is striking. Delmas successfully uses spinal anaesthesia to dilate the cervix manually under many conditions, but similar attempts in this country, some years ago, did not meet with equal success. The method was then used as an accouchement forcé in cases in which the cervix was thick and not canalized, but usually ended in failure. It may be that had attempts been confined to the type of case described above the results would have been more gratifying. One effect of the spinal anaesthetic is to cut off sympathetic stimulation to the uterus or break reflex control. The ease with which the cervix yields to manual dilatation suggests that the condition is primarily of nervous origin and is similar to achalasia elsewhere in the body.

Summary

The first stage of labour and its treatment do not start in the labour room but in the ante-natal clinic.

Undivided control over the latter weeks of pregnancy and the succeeding labour would serve greatly to lessen their complications.

The foetal head can be used as a pelvimeter only in relation to the pelvic inlet. A manoeuvre used in cases of increased pelvic inclination is described.

In the treatment of many of the complications of the first stage of labour the priority of prophylaxis is to be emphasized. The practice of meeting pre-natally the sociological problems of the patient is one which should commend itself to the obstetrician.

The condition described as achalasia of the cervix is a serious if rare complication of labour and demands a separate line of treatment.

ALCOHOL, TOBACCO, AND PHYSICAL EFFICIENCY

LECTURE BY DR. ABRAHAMS

Dr. Adolphe Abrahams, dean of the Westminster Hospital Medical School, opened a discussion at the Society for the Study of Inebriety on April 12, on "The Influence of Alcohol, Tobacco, and Physical Efficiency." The following is an abstract of his paper:

Restriction of Alcohol

To the athlete, the problem of alcohol very rarely makes an appeal from a purely moral or sociological aspect. In slavish imitation of the training methods of a famous performer, he may yield to the imbibition of draughts distasteful, perhaps even nauseating. Alternatively, the recognition of total abstinence as a conspicuous feature in a champion may inspire an attitude which regards a drop of any alcoholic beverage as virulent poison.

Restriction of drinking in the training of old-time pugilists and pedestrians was probably the most salutary law that could be framed and enforced; and when athletics became fashionable, the young bloods of the period naturally imitated the methods of the professional, more especially since in those days comparison in regard to intemperance and other evil-living would hardly have been flattering to the amateur. But nowadays the chronic alcoholic does not contemplate a course of orthodox training, or, if he attempts the venture, speedily abandons it, and the modern athlete demands a ruling on the purely