point, and any attempt at version would be attended with serious risk; indeed, the mere introduction of the hand in addition to the body of the fœtus has determined the catastrophe. The application of forceps would be almost equally dangerous; indeed, under any circumstances the use of this instrument before the full dilatation of the os and before the head has passed the brim is extremely hazardous, and has frequently caused a rupture of the cervix extending into the body of the uterus. I have already mentioned, in speaking of placenta prævia, the risk which attends extraction of the child through an imperfectly dilated os, and the same remarks apply in a minor degree to the same proceeding if carried out under other circumstances, especially in cases of accidental hæmorrhage, and I cannot see why a practice which yields a mortality of 20 per cent. in the one case should have much better results in the other.

Lastly, there is a form of rupture of the lower segment owing to the crushing and subsequent necrosis of its tissues between the head and the pelvis. It is not so easily recognised as the other forms, because symptoms do not appear until some time after labour, when the sloughs separate and a utero-vesical fistula reveals the fact, or a fatal peritonitis carries off the patient. In these cases also the forceps has caused most serious injury, the crushed tissues so easily giving way that part of the entire cervix has been torn off.

THE CONTRACTION RING AS A CAUSE OF DYSTOCIA.

Our attention has been called to this subject chiefly by French observers: Budin, Chavanne, Cheron, Demelin, Meurer, and others having reported cases in which a constriction above a distended portion of the uterus was believed by them to have been the contraction ring. In determining this point we are unfortunately limited almost entirely to clinical observation, for the contraction, being a vital phenomenon, disappears with life, but in a frozen section published by Dr. Barbour the fœtus shows a mark left by the contraction ring. The constriction may occur before, during, or after the expulsion of the fœtus. It has been observed before the rupture of the membranes constricting the bag of waters, and after the waters have escaped, obstructing the advance of the head. During the expulsion of the child it may grasp the neck, preventing the descent of the shoulders. In twin pregnancies it incarcerates the second child after the first has been expelled (Budin and Rossa). But the most familiar example is the retention of the after-birth by so-called "hour-glass contraction" of the uterus.

Dr. Rossa of Gratz, who has published some very interesting and instructive examples of this complication, describes three varieties:

1. A contraction occurring during a few pains, disappearing in the intervals, and easily overcome by the advance of the fœtus.
2. A permanent constriction associated with tetanus uteri.
3. A constriction which continues during the intervals, but increases during the pains, and associated with a diminution of the entire contractile portion of the uterus, and therefore only met with at an advanced stage of labour.

In normal labour the contraction ring is dilated by the resistance of the uterine contents and the excentric tension of the longitudinal fibres of the uterus. Its contraction is therefore due to a loss of resistance in the uterine contents at the site of the ring, diminished excentric tension, and possibly to an abnormal development of the circular fibres of the ring. Veit denies that the ring can contract *per se*, but that it does so as a part of the contractile portion of the uterus, and this is generally admitted as correct, but that does not prevent its contraction being a cause of dystocia. The conditions described as necessary by Rossa are present when no presenting part occupies the lower segment, as after the birth of a child, or where the part of the fœtus corresponding to the ring is small; for example the neck, and contraction is especially liable to occur when the head is not normally flexed, and Schatz's observation that the majority of cases of persistent brow presentation are due to the internal os grasping the neck may be more properly ascribed to the contraction ring. The contraction of the ring which immediately follows the escape of the waters is seldom of much consequence, because it relaxes during the interval, and a larger part of the fœtus enters and dilates it during the succeeding pains; but the contrac-

tion which occurs after the patient has been long in labour is a more serious cause of dystocia because, the contractile portion of the uterus having become permanently smaller, the relaxation during the interval is only relative, and no advance takes place. In a case of twins recorded by Budin he delivered the second child by forceps under these circumstances with considerable difficulty. And Rossa in a similar case had considerable trouble in performing version and extraction, and in that case the condition persisted in the third stage incarcerating the placenta. Rossa also states that where the fœtus has been driven into the lower segment the contracting of the ring above it by making traction on the thinned and over-distended wall may determine its rupture.

It has been suggested by some critics that the constricting ring was not the contraction ring, but the internal os. This may have been so in some of the cases, but certainly not in all. In one of Rossa's cases, for example, the hand when first introduced to perform version could detect no constriction, but as soon as the membranes were ruptured it was grasped by a firm ring closing upon it; this ring relaxed during the interval but returned with the next pain. This could not possibly have been the undilated os and was, he most certainly believes, the contraction ring, since the variation of contraction and relaxation could not be explained in any other way.

Treatment.—Budin, regarding the stricture as the chief cause of dystocia, advises its mechanical dilatation, but Veit, on the other hand, considering it only a part of a general tetanic condition, believes that patience and narcotics will suffice. There are cases, however, in which we cannot wait, and in these the fingers and hand are the best dilators.

I think that the facts which I have now brought before you are sufficient to prove the importance to the practitioner of a careful study of the lower segment of the uterus and the contraction ring; and if I have impressed you with a serious view of the dangers resulting from ignoring them my task has been accomplished.

THE DANGERS AND DIAGNOSIS OF BREECH PRESENTATION, AND ITS TREATMENT BY EXTERNAL VERSION TOWARDS THE END OF PREGNANCY.*

By HERBERT R. SPENCER, M.D., B.S.LOND., F.R.C.P.

Professor of Obstetric Medicine in University College, London;
Obstetric Physician to University College Hospital.

THE subject of breech presentation has always aroused the interest of those who practise midwifery. Its dangers to mother and child were pointed out by Hippocrates; its diagnosis by vaginal examination during labour is fully described by every obstetric author, and its management during labour has received an amount of attention greater than that of any other malpresentation. Yet under the three headings which form the subject of this paper I believe there is still something to be said, and the importance of the subject is my apology for endeavouring to place before you some facts concerning breech presentation which have received an inadequate consideration in this country.

Pliny in his interesting *Natural History* informs us that it is contrary to nature for children to come into the world with the feet first, and that those who did were called "Agrippa" from the fanciful etymology *ægre partus*, or "born with difficulty." This mode of delivery was thence known as the Agrippine birth. Pliny tells us that M. Vipsanius Agrippa was almost the only instance of good fortune among those who were born in this way. "And yet," he writes, "even he was affected by the unfavourable omen of his birth, as shown by the unfortunate weakness of his legs, and his short life" (which perhaps might have resulted from his abnormal birth) "and by the wicked lives of his wife and children," which we shall be less disposed than Pliny to attribute to the mere mode of delivery. I give this quotation from Pliny as it shows the existence amongst the Romans nearly 2,000 years ago of a belief in the difficulties attending and the disabilities following delivery by the lower extremity.

* A paper read before the Harveian Society.

THE DANGERS OF BREECH PRESENTATION.

But I must leave the realms of tradition, and furnish you with more modern facts concerning the dangers of breech and footling delivery. No one who has had a large experience of midwifery practice will, I suppose, deny that the life of the child is gravely threatened when it presents by the breech or feet, and that the risk to the mother is also increased by the difficulties of delivery to which the abnormal labour gives rise. Thus, Hegar's statistics show that 35 per cent. of the children were born dead, and an additional 5 per cent. died on the first day; whereas under head presentation only 2.4 per cent. were born dead, and an additional 1 per cent. died the first day. The maternal mortality was also 1 per cent. in breech cases, and only 0.57 per cent. in head cases.

Ramsbotham, whose statistics deal only with labours at term, gives an infantile mortality of 18.7 per cent., and Hecker of 22 per cent. Pinard states that of 82 cases attended at the Baudelocque Maternity 16 died, or 19.5 per cent. In a little over four years (1890, 1891, 1892, 1893, and two months of 1894), amongst 10,000 labours attended under my supervision at the outdoor maternity of University College Hospital there occurred 275 cases of presentation of the breech or lower limbs (135 males and 142 females) 208 of these children (92 males and 116 females) were born alive, and 67—that is, about one-fourth—were born dead, after excluding those stated to be non-viable or macerated. The mortality of the male children (41) was 30.82 per cent., while that of the female children (26) was only 18.3 per cent. This high rate of mortality is, in part, due to the fact—a certain number are born macerated, but are registered simply as born dead—that a large proportion of the children are born before the arrival of the attendant. This effect upon the mortality has been observed at Guy's Hospital, where the death-rate was 37 per cent. for breech presentations and 45 for foot or knee presentations. These statistics might be extended indefinitely, but they all point to one fact, and that is that the birth of an infant by the lower extremity is attended by a terrible risk to its life.

It will be well to consider the causes of the high rate of mortality in children born by the lower extremities. One of the causes of the death of the child in these deliveries is the low insertion of the cord relatively to the cervix, so that it is apt to be prolapsed or to be pressed upon during the birth, especially when the head is occupying the pelvis. This leads to a condition of asphyxia, and sometimes to attempts at respiration, during which liquor amnii and vernix caseosa may be sucked into the lungs with fatal effects. Premature respiration may also be aroused by the action of the external air upon the part of the body which is already born. But more important than these factors is the injury to which the child's body is subjected by reason of the fact that the small soft buttock takes the brunt of the labour instead of the harder and larger head. The consequence of this is that the abdominal and thoracic viscera are unduly pressed upon and hæmorrhages into and even ruptures of important organs may take place, injuries so severe that they not infrequently cause the death of the child, or if it survives leave behind them lifelong ill-effects. The visceral injuries to which the infant is liable during the act of birth, the method of their productions and suggestions for their prevention, have been fully described by me in a paper based upon 130 necropsies on stillborn children, including 26 which were delivered by the breech, read before the Obstetrical Society in 1891. I need not here, therefore, go into any detail upon this subject, but may state that all the viscera are liable to be injured by the pressure to which their delicate tissues are subjected during the act of birth, and that while cerebral hæmorrhage is more frequently found in children delivered by forceps than in those born by the breech, it is met with more frequently in the latter than in those born naturally by the head. In most of the other viscera the injuries were more frequently met with in pelvic than in cephalic presentations. The thoracic and abdominal organs, which are most frequently injured when the fœtus presents by the lower pole, are the lungs, liver, suprarenal body, and testis. The injuries to the lungs frequently cause the death of the child from pneumonia after a few days. The largest hæmatoma of the liver I have ever met with, which

measured $1\frac{1}{4}$ inch in thickness, occurred in a child born by the breech with extended legs. The injury was apparently due to the crushing of the organ by the pressure of the parturient canal transmitted through the thigh which lay over the injury. The testis is an organ especially liable to injury during the birth by the breech, both on account of obstruction of the spermatic veins caused by the pressure of the parturient canal and of pressure by the fingers or hand of the medical attendant. Thus out of 26 cases of breech presentation upon which I made necropsies in 8 hæmorrhage had taken place into the body of the organ, compressing and apparently disorganising the tubules, so that it seemed impossible for the organ to have recovered its normal structure if the children had survived. The occurrence of this injury suggests an important point in the practical management of breech cases—namely, to avoid examining the genitals, and it explains, I believe, the occurrence of orchitis in young infants, which I have observed on several occasions, and perhaps may be a cause of sterility in the male, though I know of no observation upon the testes in young children showing the effect of the injury in question upon the ultimate structure and function of the organ; but from the severity of the injury in the recent condition I have no doubt that permanent ill-results ensue, and I believe a fertile field for research lies in this direction before those who have opportunities of examining the bodies of young children *post mortem*.

Sometimes a hæmatocoele is formed, either in the tunica vaginalis, processus vaginalis, or cord. When it occurs into the processus vaginalis while the testis is in the abdomen it may apparently prevent the testis from descending. During life this injury may cause a tumour which from its dark colour has been mistaken for a melanotic sarcoma, and a child has actually had the testis removed in consequence of this erroneous diagnosis.

The uterus also sometimes has hæmorrhage into the mucous membrane of the body in cases of difficult breech delivery. I have published two observations of this kind and they explain the occurrence of some cases of so-called menstruation in young infants. I have alluded more particularly to these injuries of the genital organs on account of their importance; but a fuller account, with illustrations, will be found in the paper referred to, and I must pass on to the injuries of the muscles, nerves, and bones which, though rarely causing the death of the child, may be followed by disastrous consequences.

Hæmorrhages into the muscles are very frequent in breech presentation, especially when traction is employed to deliver. The most frequent sites are the muscles of the legs (from grasping by the hand), the buttocks, the erector spinæ and pectorales, and the superficial and deep muscles of the neck. Of these muscular injuries the most interesting is laceration of and hæmorrhage into the sterno-mastoid muscle, which gives rise to the common so-called "sterno-mastoid tumour." This injury occurs most commonly in breech deliveries, though it may be met with in any delivery in which the muscle is subjected to strain or pressure. The mode of delivering the after-coming head known as the "Prague" method is a fruitful source of this injury and should never be employed. How frequent this injury is is not known to those who do not specially examine the child for it. Personally I have seen a very considerable number of these "tumours," and it will be found in a large proportion of infants delivered by traction on the lower extremity if the child's neck be carefully examined, preferably while it is asleep, in the third or fourth week after birth. Fortunately the injury usually disappears in the course of a few months, though it sometimes gives rise to permanent wry-neck.

Another injury which, though not fatal, is followed by very serious consequences in later life is the so-called obstetrical palsy from damage to the brachial plexus during violent traction on the shoulders. Thirty cases of this affection have been recently published as occurring in the practice of one midwife.

But the soft tissues of the body are not the only ones which suffer injury. Very serious, and sometimes fatal, accidents occur to the bones and joints of the infant almost entirely as a result of the artificial manipulations which are employed in order to deliver the child when presenting by the lower extremity. Thus, the ligaments of the knee and hip-joint may be strained or torn by strong traction upon the

eg or trunk, and the bones of the extremities may be broken, especially those of the upper limb. Even the pelvic bones may be fractured if the barbarous practice of applying forceps to the breech be adopted. The fractures of the lower limb which I have seen have usually been due to unskilful manoeuvres in bringing down the legs; the bones of the upper limb, being more slender, are more easily fractured, and the bone most commonly broken is the clavicle, through pressure of the fingers placed over the shoulders to facilitate traction. It is astonishing how frequently this injury is overlooked. It may be diagnosed by the audible crack at the time of the accident, and usually by the presence of crepitus, which, however, is sometimes difficult to obtain, by the impaired spontaneous mobility of the limb and the pain to which it gives rise, and more especially by the formation of a callus within a few days of the injury, and, for those who are still in doubt, by the Roentgen rays.

I direct attention to this injury on account of its comparative frequency and of its importance, for, although I have never known a fracture of the clavicle in the newborn child to remain ununited, yet such cases do occur, and this is a heavy penalty for the child to pay through want of care in the doctor in detecting and treating the injury.

THE DIAGNOSIS.

Concerning the diagnosis of breech presentation, I wish now to say a few words. It may be made either by abdominal or vaginal examination, and of these two methods the former is more valuable than the latter, for it gives certain results before the onset of labour at a period when the diagnosis by the vaginal examination is difficult or impossible; it also involves less pain than the vaginal examination and is not attended with the smallest danger. The abdominal diagnosis of breech presentation has received much less attention than it deserves from textbook writers, particularly in this country. Some scarcely mention it at all; others speak of it as occasionally useful; but in no English textbook known to me is the subject treated methodically or in a complete manner.

Now, at the outset, it must be admitted that the diagnosis of the presentation cannot in every case be made by the abdominal examination alone. Rigidity, irritability, oedema, or growth of the abdominal or uterine walls may sometimes render unavailable this method of examination. But these conditions rarely interfere with it, and 2 or 3 per cent. is the outside limit of the number of cases in which the diagnosis cannot be made by external examination alone in cases where the uterus is not contracting and the liquor amnii is intact.

It is therefore a method of diagnosis which should be in the hands of every practitioner of midwifery; and it has the advantage of being easily acquired if the requisite steps in the diagnosis be methodically followed.

Before making the examination it is advisable that the bladder and bowels should be emptied. The patient should lie on her back along the edge of a couch or bed, with the shoulders somewhat raised, and the head supported by a pillow. The mistake is often made of placing the patient upon a flat couch, without any support for the head and shoulders. This position is very uncomfortable for a patient who is advanced in pregnancy owing to the interference with respiration; the abdominal walls are consequently made rigid, and the examination is thereby rendered difficult. But while it is advantageous to raise the head and shoulders no advantage is derived from the drawing-up of the knees in a case of advanced pregnancy.

It is necessary that the abdomen be uncovered; even the thinnest underclothing greatly affects the results of palpation. The surface of the palms of the hands, which should be warm, applies itself so accurately to the skin of the abdomen that the tissues between the hands and the fœtus become, as it were, incorporated with the hands, and the undistracted attention can be fixed upon the subjacent fœtal body.

The various manipulations cause no pain in a normal case except when deep pressure is made to reach the contents of the pelvic cavity; there is then often a little tenderness produced by the pressure, especially in primiparæ, but even in them it is often absent.

Inspection of the abdomen is of value sometimes in the diagnosis of pregnancy, but not often in the diagnosis of the

presentation of the child. In cases, however, where a vigorous kick is observed at the upper part of the abdomen, and especially when the movement of the child's limb causes a ridge to rise and pass across the upper part of the abdomen, it may be concluded almost with certainty that the child is presenting by the head.

Auscultation is of somewhat greater value in helping the diagnosis. The fetal heart sounds are usually heard in breech presentations at a point situated above the middle of the line joining the fundus and the pubes, while in head presentation they are heard below this point, and in both presentations it is the rule for the sounds to be heard best through the back of the child except when the head is extended, and presents as a face or brow.

But exceptions to these rules will be found in practice occasionally to occur, and these greatly lessen the value of auscultation in the diagnosis of the presentation of the child, and reliance should be placed almost entirely upon the third method of physical examination—palpation—and this I shall now describe in detail.

The first thing necessary to make out by palpation is the direction of the long axis of the uterus. This may often be detected by inspection, but may always be determined by placing the two hands symmetrically along the sides of the uterus, and depressing the hands during expiration; in cases where the wall of the uterus is flaccid, it may be necessary to wait for a momentary contraction, which causes the margin to be clearly defined. Having ascertained by this manipulation that the long axis of the uterus corresponds with the long axis of the mother's body—approximately, for the fundus is often tilted a little to one side, usually the right—the observer is in the position to diagnose that the child is presenting by one pole; and further examination is necessary in order to determine whether it is the pelvic or the cephalic pole which is presenting.

The first step is to explore the lower segment and the pelvic cavity. For this purpose the hands should be placed flat on the abdomen symmetrically, with the fingers pointing downwards, one beside each rectus, and with the finger tips just above the pubic rami. At this stage a very common error is that of regarding the upper border of the pubic hair as the level of the top of the pubes, whereas it is often three-quarters of an inch or an inch higher than the pubes. This point is of more importance at the early periods of pregnancy than later on, but it should be borne in mind in order that full advantage may be taken of palpation. Then the fingers are depressed by flexing the metacarpophalangeal joints, keeping the palms flat during the patient's expiration, and, if nothing be felt occupying the pelvic cavity, the hands are placed in the same direction but at a slightly higher level with the finger pulps over the internal abdominal rings. The sensitive surface of the fingers will be thus placed over a thin part of the abdominal wall, and by depressing the fingers as before during expiration the fetal pole occupying the pelvic cavity or situated over the pelvic brim can be felt. But unless deep pressure be made, especially in the case of primiparæ, it is possible for the head deeply placed in the pelvic cavity to be overlooked by a careless observer, and for the chest of the child to be taken for the breech. If the cephalic pole is below, it has the characters of a large, rounded, hard body, felt higher on one side of the pelvic brim than on the other (Pinard's sign). It may give *ballottement*, but not usually in advanced pregnancy. If, however, it is the breech which presents, we find at the pelvic brim or in the cavity a body smaller, softer, and less regular than the head, and often having movable bodies (the lower limbs) near it and the body has not below it the hard head as the child's chest would have; it also has a tendency to revolve during manipulation around the long axis of the child's body, a feature rarely met with in the chest or head at an advanced period of pregnancy. More detailed examination may make out the U-shaped hollow of the loin (formed by the loin, the anterior part of the ilium, and the thigh), which differs from the posterior axillary fold in the chest by the presence of the hard corner of the ilium; in some cases, too, the distinctive characters of the feet may be made out.

There is one form of monster in which the head is small and resembles the breech somewhat closely. I allude to the

anencephalic foetus. I have had two opportunities of examining the abdomen during pregnancy in cases where the anencephalic foetus presented by the head. Neither case was diagnosed. The first, examined at a comparatively early period of pregnancy, did not attract any special attention. In the second case I recognised and noted the small size of the head, but did not, as I should have done, make a bimanual examination to clear up the diagnosis. By this means, and perhaps by the production of foetal movements on pressure upon the remains of the brain I think the diagnosis could be made, but I am not aware that this has ever been done by abdominal palpation.

By the method and with the precautions I have mentioned the diagnosis of breech presentation can be made in the great majority of cases by the abdominal examination of the pelvis and lower segment; but there remains the examination of the fundus of the uterus, which yields results even more valuable, for it is at the fundus that in these cases is found that part by which human beings are best recognised—the head. In order to feel it the hands are reversed, that is they lie over the body and fundus, one on each side, with the fingers pointing upwards, and while the uterus is fixed by the left hand the right depresses the abdominal wall as before and moves over the surface until the head is got between the fingers of the two hands. If this be impossible, then the head may be felt by the movement known as *ballottement*, that is by feeling the head re-percuss the fingers of the examining hand when they are smartly “dipped” into the abdominal wall. And in some cases the head may be tossed like a ball between the fingers of the two hands. I have found that an even better means of detecting the head is by a movement of shaking or “succussion” with one hand. For this purpose the left hand grasps the fundus lightly, and by a movement of shaking the head can be tossed between the fingers and the thumb, and *vice versa*, with remarkable distinctness. In many cases, too, the size and consistence of the

Fig. 1.—Shaking the head in the diagnosis of breech presentation.

head can be better felt by grasping with the left hand than by both hands. Dr. Budin has pointed out that the fundus of the uterus is tender over the child's head during the ordinary dipping movement for obtaining *ballottement*. I have often observed this tenderness, but it is not confined to breech cases, though more marked in them. It is to be remembered that

occasionally *ballottement* can be obtained with the breech, though never with the same distinctness as with the head.

The characters of the head at the fundus, to which attention must be directed, are its large size, rounded shape, ready mobility, *ballottement*, and the groove formed by the neck between the head and the back, which is absent between the breech and the back. To this groove attention has especially been called by Professor Pinard.

About the palpation of the sides of the uterus I need say but a few words. On one side of the uterus will be felt a convex resistant surface passing below without break into the breech, but above separated from the head by the groove of the neck; on the other side, the flatter or concave, less resistant, less regular surface interrupted by movable bodies (the limbs), and usually, owing to the presence of the liquor amnii or placenta, yielding a fluctuation thrill more marked than on the other side.

Concerning the diagnosis of presentation of the breech by vaginal examination I need say nothing, the subject being well treated in every textbook of midwifery. I will only mention that when the breech presents obliquely—“presentation of the haunch” of old writers—the presence of the anterior corner of the iliac bone in the hollow between the limb and trunk will enable us generally to distinguish the haunch from the shoulder at an early period of labour before the other characteristic features can be made out. But while the liquor amnii is present, and the uterus not contracting, the diagnosis can almost always be made without resorting to a vaginal examination.

THE TREATMENT BY EXTERNAL VERSION.

I now proceed to consider the question of the treatment of presentation of the breech by external version towards the end of pregnancy. Since the days of Hippocrates external manipulations have been practised in order to change the faulty position of the child and cause the head to present; the Arabian physicians, the Mexicans, and the Japanese long ago practised manipulations for this purpose, some of which apparently resembled the external version of the present day. But it was not until the beginning of this century that mainly through the work of Wigand (1807) this method of rectifying faulty presentations became widely known. Since that date the treatment has been extensively employed on the Continent, but very little in this country. Dr. Pinard, of Paris, especially, has written a most valuable treatise upon the subject, giving a table of 26 cases, in which the operation has been carried out without any mortality to the mothers, and with only one deadborn infant, two others subsequently succumbing.

I have notes of 6 cases in which the operation has been performed at periods varying from seven and a-half to eight and a-half months of pregnancy, five times by myself and once by my assistant, Mr. W. B. Morton. The mothers were delivered, with head presentation, and recovered and the children survived. I have also performed the operation several times in the class of practical gynaecology, but unfortunately have no notes of these cases, so must limit my remarks to these six instances. The little operation is very simple, takes but a few seconds as a rule, and causes no discomfort to the patient. The patient lies as for abdominal palpation, and the child's breech having been seized with one hand and pushed or lifted up is then pressed to one side and upwards, while the head, seized with the other hand, is pushed in the opposite direction. I find more power is obtained in a difficult case by directing the head downwards and towards the side on which the back of the foetus lies and thus transmitting the force in the direction of the spinal column, than by directing the head towards the abdominal aspect of the child, which tends rather to flex the head upon the body than to make the foetal body revolve. The operation is usually remarkably easy, and rarely fails when carried out at the period recommended, namely, at about seven and a-half months of pregnancy.

A tendency for the malpresentation to recur exists in those patients who have a pendulous abdomen; but generally an abdominal belt or rest for a few days in the recumbent position will prevent this. Some sort of abdominal belt should always be worn after the operation unless the hand sinks well into the pelvis. Dr. Pinard has designed a special belt which he calls the “*ceinture eutocique*,” for the purpose. Its main feature

is the presence of inflatable air-cushions inside the belt which are applied to the two sides of the uterus and maintain the foetus in position. The belt is ingenious but somewhat cumbersome. I have found an ordinary abdominal belt, and even a home-made flannel belt, sufficient for the purpose. It is advisable that the abdomen should be examined occasionally to see that the foetus maintains its attitude. In the six cases mentioned it has done so and the child has been born alive by the head. It is sometimes found that the child, though maintaining its presentation, alters its position, as, for example, from a first vertex to a second. This change I have often noticed in ordinary head presentations during the last few weeks of pregnancy, but it is possibly more common after external version, for the reason that a breech with the back to the left is usually converted into a vertex with the back to the right, and that the child's back will tend to revolve to the side it previously occupied, possibly on account of the particular shape of the uterine cavity.

Fig. 2.—Direction of the forces in external version for breech presentation. The upper arrow shows the direction of the push of the left hand on the head (in the direction of the curve of the spine), the lower arrow shows the direction of the pull of the right hand on the breech.

The period at which the operation should be performed is preferably at seven months and a-half of pregnancy. Before this date the presentation of the child is not definitive, and the operation, therefore, would be in many cases unnecessary; after this date, the foetus rarely changes its presentation, except in cases of contracted pelvis or hydramnios or pendulous abdomen. The operation becomes progressively more difficult as term is approached, and it will usually be found to be very difficult or impossible during labour at term.

There are several contraindications to the performance of external version for breech presentation. First amongst these comes multiple pregnancy. Amongst the 275 cases of breech presentation mentioned above, 55, or exactly one-fifth, occurred in multiple pregnancies, with the following results to the child:

In 24, the breech presentation occurred in the second twin with 5 deaths.

In 15, the breech presentation occurred in the first twin with 2 deaths.

In 12 (6 cases), the breech presentation occurred in both twins with no deaths.

In 4 (2 cases), the breech presentation occurred in the second and third triplets with no deaths.

This gives a mortality of 7 in 55 cases, or 12.7 per cent. From these figures we see that multiple pregnancy is a frequent cause of presentation of the breech, and that the imme-

diate danger to the child is less than in single pregnancy. For this reason, and because the operation is difficult and not without risk when the two children occupy the same amnion, external version for breech presentation in multiple pregnancies should not be performed during pregnancy nor during labour except in favourable circumstances for the second twin.

Other contraindications to the operation are a considerably flattened pelvis, a dead foetus, a malformed uterus, and placenta prævia. I have also seen the operation fail during labour owing to the cord being wound five times round the child's neck, and in one case of fibroids complicating pregnancy it was found impossible to move the head laterally, owing to its fibrous covering, even at the Cæsarean section, which had to be performed owing to the obstruction caused by the fibroids. Nevertheless, in all ordinary cases the operation is very easy and painless, and should in my opinion be carried out whenever the breech presents and the patient is advanced to seven and a-half months of pregnancy.

This operation, of course, involves the necessity of the patient's being examined during pregnancy, a necessity which is not recognised by all doctors or patients. Yet it is time that this examination became a routine practice, for without it patients and their infants are occasionally brought into the greatest peril, and not rarely lose their lives. As a result of this routine examination conditions may be recognised which can be obviated by timely interference. I believe the presentation of the breech to be one of these conditions; and I am sure that its treatment by external version during pregnancy is so free from objection that it is worthy of extensive trial. It is in the hope that others may be induced to practise it that I have ventured to publish such a small number of cases. It would be a great gain to be able to prevent this dangerous presentation, and to be sure that the child would always present by the head; for, in the words of Pliny, it is natural for man to come into the world by the head and to be carried to the grave by the feet—*"Ritu naturæ mos est capite gigni pedibus efferri."*

SOME INSTANCES OF CYSTIC AFFECTIONS OF THE BREAST, WITH REMARKS.

By A. MARMADUKE SHEILD, M.B., F.R.C.S.,
Surgeon to St. George's Hospital.

THE remarkable diversity in the pathology, symptoms, and treatment of cystic affections of the breast is well known. Never a year passes in the practice of any operating surgeon without some of these important cases coming under notice. It may be that an error in diagnosis is committed. It may be a case where the greatest difficulties are experienced in the appropriate treatment. The profession at large is hardly aware of the frequency and complicated nature of these maladies. Mistakes in diagnosis are still frequently committed, and errors of treatment, I feel convinced, are all too common.

I propose in this paper to shortly relate the particulars of some of these cases, which have recently come under my notice, and to make some brief practical comments upon them.

CASE I.—CYST OF BREAST IN A PATIENT AGED 45: EXPLORATORY INCISION: REMOVAL BY DISSECTION: CURE.

History and State on Examination.—A very stout single lady, aged 45, saw me in July, 1900. In the left mamma, towards the axillary aspect, was a swelling the size of a small orange; it was deeply seated, and felt extremely hard on superficial examination. The nipple was retracted, but the patient stated this had always been the case. No fluid had ever escaped from the nipple. The axillary glands were enlarged and plainly to be felt. Upon observation of this factor in the case two surgeons had pronounced the affection cancerous. To return to the swelling itself. The skin over it was normal, but the veins were a little enlarged. The history, as is so common in these cases, was sufficiently vague. The patient was positive, however, that the "tumour" had existed for at least six months. Occasionally pain and a general sense of uneasiness had been experienced. Close examination showed many of the signs we are accustomed to associate with the diagnosis of cancer. Thus the supposed tumour was hard and heavy, and the mammary substance moved about with it, yet on firm palpation with the pulp of the index finger a very distinct sensation of elasticity could be elicited. From that circumstance I felt sure that the swelling contained fluid, whatever its nature might be.