and Wales. At that time there were twenty-five county boroughs and counties in which there were more deaths from puerperal sepsis than there were cases notified. In eleven other areas the deaths and the notifications were equal in number. The official report for the year 1921 shows that:

In 10 areas there were 16 deaths and 0 notifications.					
" 28	"	"	114	"	63
" 28	"	"	180	"	180
" 27	"	"	0	"	0
—			—		
93			310		243

There were only 204 areas in all, and in 93 of them the total of deaths was larger than the total of notifications. In the other 111 areas results were not much better, for the general outcome is that there are only about twice as many notifications as there are deaths, instead of some thirty times as many.

When the Act of 1898 says "puerperal fever" it surely means puerperal pelvic infection. If not, what does it mean? When a midwife observes "rise of temperature above 100.4° F. with quickening of the pulse for more than twenty-four hours," she has to call in a registered medical practitioner. If he then decides that the case is one of puerperal pelvic infection presumably he is supposed to notify the case. If this is so, some 70,000 or 80,000 cases might have been notified in England and Wales during 1920, and quite a nice sum would have been transferred from the public pocket to that of the medical profession—not that the public or the patients would have been much the better for it. What a curious fascination "notification" possesses for some minds! Some propose to notify pregnancy, and others venereal disease. They surely know that the notification of tuberculosis is a failure, and should see that if twenty-five years of compulsion has only secured comic figures concerning a respectable condition like puerperal pelvic infection, success is not likely with syphilis and gonorrhoea.

Why is a patient with puerperal pelvic infection taken to a fever hospital? The idea seems to be that if she is left in her own home she is a source of contagion. So she may be if the person who nurses her continues to attend other parturient and lying-in women. But in the cases attended by midwives this possibility is efficiently prevented by the Midwives Act, and other patients have their own monthly nurses and their own medical attendants.

Lying-in women and their friends strongly resent removal to a fever hospital. The family doctor also objects to it. The medical men in charge of the fever hospitals also dislike having to treat cases which are not in their own line. They know the cases are not infectious; they profess no special knowledge of the diseases peculiar to women or of the treatment of pelvic inflammations; nor are nurses trained in fever hospitals accustomed to carry out the local treatment of pelvic conditions.

In certain exceptional cases, generally late in the course of the inflammatory reaction, suppuration occurs and collections of pus form in the pelvic peritoneum, in the cellular tissue, in the tube, or in the ovary. These cases demand surgical intervention, which should be carried out at the time and by the method judged to be most suitable by men who have served their time at work of this kind in hospitals for women. Thus those cases of puerperal pelvic infection which require skilled nursing, experienced judgement, and possible surgical treatment, should be sent, not to fever hospitals, but to hospitals for the diseases peculiar to women, or to general hospitals staffed and equipped so that they can deal efficiently with pelvic cases. With very good technique 'septic and clean' cases can be nursed safely in the same wards. But perfect technique is difficult to maintain, and it is no doubt desirable to have separate "septic" wards with distinct nursing staffs for septic cases, whether they are puerperal or not. This has been done for a long time in the Birmingham Hospital for Women, where the municipal arrangements for the care of puerperal pelvic infection are an example for other cities and towns.

REFERENCES.

¹ *Surg., Gyn., and Obstet.*, June, 1923, p. 797. ² *Amer. Journ. Obstet.*, December, 1922, p. 645.

THE EXTENDED LEGS AS AN ABNORMALITY IN THE FOETAL ATTITUDE.*

BY

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BARBOUR, in the *Anatomy of Labour* (1899, page 187), wrote:

"To sum up as regards the attitude of the foetus, we may say that frozen sections, which give us an opportunity of studying the attitude of the foetus *in utero* with precision, show that there are minor deviations from the classical description adopted in the textbooks. The occurrence of these must be borne in mind, and we must not attribute to labour changes in the relation of the head and trunk which may have been present before labour began."

Similar discernment is my aim under the heading of this communication.

The foetal limbs in relation to the head and trunk in their minor deviations are both frequent and insignificant,

FIG. 1.—A 4½ months male foetus, with extended legs, within the intact amniotic sac.

but in their major deviations attach the designations of extended legs and extended arms.

In the foetal attitude, as an abnormality, extension of the legs signifies full flexion of the hips and full extension of the knees, placing the full length of each of the lower limbs in contact with the corresponding side-front of the abdomen and chest; the foot reaches on each side the face and lower hemisphere of the skull. This abnormality in the foetal attitude is found early in pregnancy.

Mrs. O. D., aged 30, primigravida, gave birth to a 4½ months male foetus at 11 p.m. on August 14th, 1912. The last menstruation ceased on March 27th; the haemorrhage of a threatened abortion at two months continued scantily for three weeks, and then more freely up to the time of the completion of the miscarriage. During the course of the miscarriage her doctor first diagnosed a head, and, forty-eight hours later, a breech, presentation; active foetal movements were felt by the finger introduced into the cervix. The intact amniotic sac contained a male foetus with extended legs. The whole placenta, some blood clot, and a portion of the extraplacental chorion were expelled. (See Fig. 1.) The amnion was relatively flaccid from the transudatory escape of the liquor amnii.

The narrow pole of the foetal ovoid by adaptation presented as an incomplete (the frank) breech—that is, the breech with extended legs. If, as on rare occasions it has done, the wider pole of the foetal ovoid presented as the vertex, the foot and hand of the foetus on each side at the periphery of the head would be palpable per vaginam, but not obstructively overlapping the vertex.

* Read before the North of England Obstetrical and Gynaecological Society, February 15th, 1924.

In the undisturbed primary attitude the legs are fully extended along the front of the trunk; the upper limbs are not fully extended; they are slightly raised to bring the forearms external and parallel to the fibular sides of the extended legs, lodging the hands behind the feet; the flexed elbows are in contact with the outsides of the extended knees, the upper arms crossing the sides of the chest.

FIG. 2.—Attitude of foetus at 7½ months.

The foetal attitude here revealed later at 7½ months (Fig. 2) completely coincides with the earlier one of 4½ months (Fig. 1); the foetal ovoid is again maintained, in shape neither a wedge nor a V. On close inspection a little extra-flexion of the trunk and head is noticeable, and as a consequence the legs and forearms are pushed a little away from the front of the chest and abdomen; the whole is explained by the shortening of the foetal ovoid due to an uneven uterine retraction after the rupture of the Caesarean scar. The uterus and contents were obtained *post mortem*; death was due to shock from intraperitoneal haemorrhage. The surgeon in charge had previously excised at the second Caesarean section the weak scar of the first Caesarean section. At the time of her death the patient was a 3-gravida awaiting a third Caesarean section.

The two specimens, Figs. 1 and 2, demonstrate correctly the primary foetal attitude with extended legs. Their utility in the teaching equipment of obstetrics in the University of Liverpool expresses a great debt to the donors of valuable object lessons permanently lodged in the museum; in some of my more active museum days the cost of publication was prohibitive and postponed the illustration and description of them.

We are reminded in history that, thanks to her tombs, Egypt is known, and thanks to Pompeii Rome is also known. Statements in

FIG. 3.—At 5 months.

FIG. 4 (Jenty).—At term.

history, as in poetry, embellished, imagined, coloured, or transformed, must be checked before they are accepted. Can we question the truth that is silently evolved from the undisturbed foetal attitude preserved in the museum specimens? With this anatomical demonstration before us, we are justified in strengthening our statements and in converting conviction into action.

In civil cases or in medico-legal inquiries when expert evidence is sought or given there is less ground for hesitation or difference of opinion. In ante-natal clinics there is a more sound foundation for advancement in spite of the handicap in the physical examination; the head and trunk are stiffened by the lower limbs; the back is less palpable, and the smaller frank breech in a primigravida is lodged in the brim during the last two months of pregnancy and is less recognizable along the slope of the back from above; the physical characters of the breech are often masked below on vaginal examination; at the fundus the head

FIG. 5.

FIG. 6.

above the occipito-vertebral groove is more fixed or deprived of an appreciable part of its normal "ready wobble"; the ends of the limbs are apt to bear by their close contact false witness in the identification of the head; external version is from the same conditions also handicapped. Ante-natal diagnosis from doubt or suspicion may rise to the greater height of certainty.

On this section of obstetrical anatomy previous publications are not abundant. Henri Varnier in *La Pratique des Accouchements* (1900) issued, if not identical, almost identical, illustrations and descriptions of the primary foetal attitude with extended legs—(1) at 5 months, and (2) at term. The French source of this previous publication is not remarkable considering the leading prominence of the works of French writers on the "mode des fesses." Leopold in his *Atlas* (1897) on the uterus in pregnancy (Figs. 18 and 19) displays a different attitude on the two sides of the foetus.

On the subject by British obstetricians the best of clinical contributions was made in 1896 before the London Obstetrical Society by Dr. W. S. A. Griffith and the late Dr. Arnold W. W. Lea. They shook the testimony launched by Lefour, and adopted by his followers, that the extension of the legs when primary—that is, before labour—was temporarily reproduced after the child was born; not so when secondary—that is, during labour. In support of their findings they quoted Ollivier, who had stated a case in which the legs were believed to be extended fourteen days before labour, and yet after birth the attitude was normal.

The advance in accuracy achieved by Griffith and Lea still stands to the credit of their clinical methods. After

their paper had been read the President of the London Obstetrical Society, Sir Francis Champneys, effectively illuminated the advance by stating: "The newness of the subject might be illustrated by the fact that so careful and learned an observer as the late Dr. Matthews Duncan told him that he had never seen a case of primary extension of the legs." Sir Francis Champneys at the same time referred to an instance of primary extension of the legs in a patient in labour with a normal pelvis and a small child

FIG. 7.—The breech, with extended legs impacted in the pelvic cavity.

in first vertex position, with a left hand and left foot also presenting; he suspected twins. The child he delivered by forceps—no twin was present.

Dystocia, in the progress of a labour without disproportionate factors, or even, as in Sir Francis Champneys's case, with a normal pelvis and a small child, emphasizes the untoward function of extended legs as splints, on the accepted teaching of M. Tarnier.

FIG. 8.—Delay in the pelvic cavity due to extended legs. Amputation of the leg.

It is no small obstetrical advantage, from an anatomical demonstration of the foetal attitude, to realize clearly what others have clinically proved and stated—that there is nothing beyond possibly a slight degree of dystocia inherently attributable to the primary breech or vertex presentation with extended legs. The paper by Griffith and Lea, and the discussion that followed at the London Obstetrical Society, impressed the need of a wider appreciation of disproportionate labour factors and pelvic contraction in breech mechanism and management. We cannot adhere too rigidly to the anatomical attributes of the primary attitude of the breech with extended legs if we wish to eliminate extended legs from too large a share in impacted breech causation—for example, when there is also a large child or a contracted pelvis.

To return again to the anatomical features (Fig. 2) of breech with extended legs, admitting that the extended

FIG. 9.—Birth of the breech.

FIG. 10.—Breech with extended legs.

legs diminish latero-flexion of the trunk during labour, attention must be paid to the part played by foetal spinal flexion: when the foetal hips and pelvis are flexed and raised the lumbar spine is also flexed and brought down. This is an item of importance in the mechanism of labour. Spinal flexion interferes with or delays rotation in all cases, but more especially so in sacro-posterior cases where the bitrochanteric diameter is across the outlet and the extended legs are held, rigidly packed, at the back of the

pubis, whilst the puffy genital tumour is protruding or visible at the vulva.

Under general anaesthesia traction on the groin beyond a mild or moderate force is dangerous: traction alone, like other endeavours, may be too cramped and too partial in its purpose; with average labour factors before him, the obstetrician by hand can partly undo the spinal flexion, and in sacro-posterior cases axially rotate the foetal breech

FIG. 11.—Diagram showing position of child in (a) L.S.A.; (b) R.S.A.

into a sacro-anterior position for spontaneous or mildly aided expulsion.

Without selective effort, but with an ample sufficiency for comparison, I collected at random five textbook illustrations. These illustrations do not reproduce the relations of the primary foetal attitude with extended legs; they are consistent only with the secondary extension of the legs compiled from original or borrowed reconstruction of anatomical relations gathered from clinical observation at labour attendances. These reconstructions have to be checked or controlled by the actual demonstration of anatomical facts.

The trend of modern evidence has been to increase by earlier, more thorough, and more exact clinical recognition the number of cases of primary extension of the legs. Hence the relations of the primary attitude of the foetus with extended legs illustrated to-day become increasingly important facts in obstetrical applied anatomy.

In my own practice and experience these relative facts have been proved and re-proved.

ACUTE BRONCHITIS: SOME UNUSUAL ASPECTS.

BY

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CATCHING cold and having a cough are so frequently associated that we seldom stop to inquire whether they are the simple events they appear to be. Colds are known to be excited by exposure to alternating temperatures, bad atmospheric conditions, inhalation of dust, etc., whilst the infective agent of the disease may be one of many micro-organisms or a mixture of several. There is always the possibility of a head-cold or naso-pharyngeal catarrh descending into the deeper respiratory tracts and giving rise to bronchitis, and while this may affect people of all ages it is at the extremes of life its effects are most severely felt. There may be an idiosyncrasy to the malady or an acquired susceptibility to the influence of certain micro-organisms compared with others.

In the commoner types of bronchitis the trachea and large bronchi are mainly affected. The mucous membrane is reddened, the capillaries engorged, and the surface covered with exudation; the epithelial lining degenerates and the cells are thrown off in the expectoration, which, at first scanty, ultimately becomes muco-purulent. It is difficult to state what takes place when the bronchi are invaded by micro-organisms other than that the mucous membrane in its reaction throws off an increased secretion accompanied by cellular proliferation which may become purulent, also that any organisms present may acquire pathogenic