

A NEW METHOD FOR ESTIMATING THE RELATIVE SIZES OF THE FŒTAL HEAD AND MATERNAL PELVIS.

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SOME little time ago I came across, in the report of a clinical lecture by Barbour, the remark: "The foetal head is the best pelvimeter." The aphorism, so true in its completeness and so complete in its truthfulness, a characteristic by no means common to such sayings, delighted me so much that I determined to make it the text of my few remarks.

I need not, in an assembly of obstetricians and gynæcologists, take up time in enlarging upon the fact that neither by manual examinations, even the most careful, nor by pelvimeter, even the most modern, can the exact degree of pelvic deformity be appreciated. If any doubt the truth of that they have only to see, as I have done, a few cases of pelvic deformity, in which the pelvis was measured during life and after death in the post-mortem room, to be convinced of the fact. I have seen a difference of a quarter of an inch to half an inch in the conjugate between the two measurements, and that not only in cases of my own but in those in the hands of others, of much longer experience.

Then, again, attempts at estimating the size of the foetal head *in utero* must, I think, be admitted by all to be most disappointing. The fact that the abdominal and uterine walls are often so resistant that one cannot be sure of the exact spot on the surface of the skull one is placing the ends of the

calipers upon, and the fact that seldom is it possible to take a transverse measurement of the head, are some of the more important difficulties in the way of this method of examination.

With sorrow, then, we must admit that by the present methods at our disposal we can obtain measurements of the maternal pelvis and foetal head only approximately correct.

In recent years, and more especially since Müller's writing on the subject, more attention has been given to the relative sizes of head and pelvis. I say in recent times, because Rigby, whose writings always appear to me amongst the most valuable in obstetric literature, to some extent appreciated this, for he distinctly speaks about the relative proportions of head and pelvis.

To Müller and Pinard, however, is due the credit of having first described two methods for testing the relative sizes of the

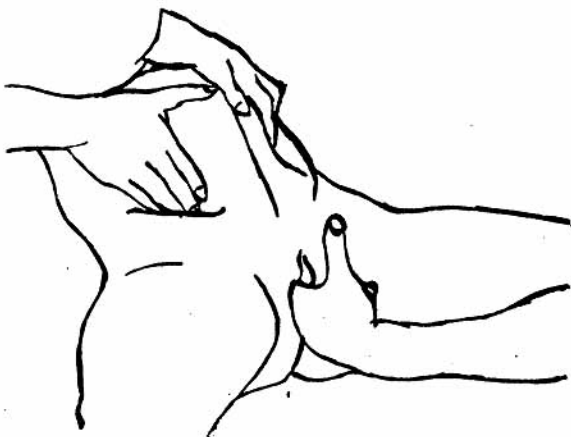


FIG. 1.—MÜLLER'S METHOD.

foetal head and maternal pelvis. Müller's method (Fig. 1) is well known, and is quoted in all text-books. Originally it was introduced for the purpose of helping us to decide the most suitable time for the induction of premature labour in particular cases, the time for inducing labour being fixed as the time when

the head would just pass the brim and no more. In recent years the usefulness of the method has been extended, and I have frequently, both during labour and pregnancy, employed it for the purpose of estimating the proportions of the head and the pelvis. Employed for the latter purpose, however, it has often disappointed me; for while one can appreciate readily when the head can be pushed past the brim, if it is arrested then it is impossible to estimate from the internal examination alone what proportion of the surface of the head is beyond the brim.

Pinard's method (Fig. 2) is quite different. By it the estimation is made by purely external manipulations. The fingers



FIG. 2.—PINARD'S METHOD.

of one hand which estimates the engagement of the head are pressed over the brim at the symphysis, while with the other hand the head is pressed into the pelvis. This method I have also frequently employed, but while the results are often quite satisfactory, I have often failed to obtain by it a sufficiently exact estimate, and to be of real value the estimate must be very exact.

Pinard's method has the advantage over Müller's, that all manipulations are made by the operator himself; for in Müller's

method, you know, an assistant grasps the head and pushes it down into the pelvis. Now that is a great disadvantage; think in our gynæcological examinations how unsatisfactory would the examination be if an assistant had to press down the uterus or tumour.

Appreciating, therefore, the advantages and disadvantages of each method, it occurred to me in my examination of cases of contracted pelvis, that a combination of the two methods might be devised, and it is this method which I desire to bring under your notice this evening.

As the illustration shows (Fig. 3), one takes with the right hand a paw-like grip of the head and presses the head into the



FIG. 3.—AUTHOR'S METHOD.

superior straight. Two fingers of the left hand are passed into the vagina. These estimate the consistency and manner of engagement of the head, also, if it has not been already done, the nature and extent of the pelvic deformity. Further information, however, is obtained by utilising the thumb which is passed along the brim, and estimates the degree of overlapping. By this bimanual method, also, the head is moved from side to



side at the brim, and the engagement of the occiput and sinciput is tested.

By this method I have been able to estimate with great accuracy the relative proportions of the foetal head and maternal pelvis, and thus been able to appreciate the amount of difficulty the head will encounter in passing the brim. This is invaluable in deciding upon treatment in moderate degrees of pelvic deformity. Thus, by this method, I decide whether forceps, symphysiotomy, or Cæsarean section should be chosen. In carrying out the method of examination, it is best to stand at the patient's side, not right in front. It is of course a great advantage, and often a necessity, to have the patient under an anæsthetic; often, however, that is not necessary. The objection that the method is inapplicable in breech presentation falls to the ground when one remembers that in the great majority of cases a cranial presentation can be brought about by external version.

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*Professor Simpson* said they had had ingenious suggestions before from *Dr Munro Kerr*, and this was another one—ingenious and interesting. It seemed so simple and natural, and he could quite believe it was of value. He considered it would also be of use as an excellent supplement in the consideration of the induction of premature labour. He supposed it was of special value in multiparous women.

*Dr Haig Ferguson* wished to add his appreciation of *Dr Munro Kerr's* paper. His only point of criticism was on the last sentence in the paper, as to the turning of a breech case into a vertex. He would like to know if *Dr Kerr* was in the habit of doing this, for that was not the teaching in Edinburgh in full-time pregnancy. And, indeed, *Dr Donald of Manchester* considered it better to turn a craniotomy case into a breech case first. With this opinion most obstetricians agreed as it was certainly easier in many ways to deal with the after-coming head in such circumstances.

*Dr Buist* wished to congratulate *Dr Munro Kerr* on his ingenuity. His own experience of external version was that it was not such a difficult operation as *Dr Haig Ferguson* would make out. As to theoretical objections, his own experience was that they obtained better results with the head than the breech as far as the child was concerned, and no worse for the mother. There were cases where the method could not be used, but that there were certainly cases in which it would prove very useful.

*The President* joined in congratulating *Dr Munro Kerr*. He supposed that *Dr Munro Kerr* had found the method to be very useful from working with it practically, and he believed that it was specially of value in multiparæ with not very thick abdominal walls.

*Dr Munro Kerr*, in reply, thanked the Fellows for their kindness in receiving the paper. With regard to what *Professor Simpson* said as to multiparæ, the method was certainly easier in them. As to *Dr Haig Ferguson*, he must differ entirely from him. As *Dr Buist* had pointed out, version was not difficult. It was the exception to find any difficulty in that operation, especially if the child were premature, and one was examining during pregnancy. And even at full time, although not so easy, it was not very difficult, and he considered it good treatment to carry it out. In deciding as to what operation to perform in a contracted pelvis, the measurement of the foetal head and of the pelvis were the first steps towards obtaining a rough idea of what to do. The final step was the testing of the head and the pelvis, and by this one can decide upon induction of labour, forceps, symphysiotomy, or Cæsarean section. In such cases, if one did not perform version and get the head down, one would not find the relative size of the head and the pelvis. As to the advantage pointed out by *Dr Donald of Manchester*, it was in regard to craniotomy—in perforation of the after-

coming head. And in craniotomy cases where there was a slight degree of deformity, it was easier so to perforate. In cases of marked deformity, however, it was more difficult to perforate the after-coming head. Dr Fordyce and Dr Buist had pointed out the most important defect in the method. One could not be sure of how the head engaged. In moderate degrees of deformity, the head will come through sometimes with difficulty, at other times easily. One reason for this was, that in these cases where there was some scoliosis of the pelvis, the occiput might be on the roomy side or on the narrow side. But the most important was the parietal presentation. If that were an anterior one, the head would come through much more easily than if it were a posterior parietal presentation. It was difficult to tell whether one was making it an anterior or a posterior parietal presentation, but one must palpate out the exact position. With regard to justo-minor pelvis, one can also in such a case test the engagement of the head but it is not of so much value.