Boyd (G. M.)

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SYMPHYSEOTOMY.*

BY G. M. BOYD, M. D., PHILADELPHIA.

The serious problem of how to accomplish delivery in the flat and generally contracted pelvis has presented itself to me in its several phases during the past year. Shall we induce premature labor, or shall we allow our patient to go to term and resort to one of the following operations: High forceps, version, symphyseotomy, or the Cæsarean section? This question confronts the *accoucheur*, and is a difficult one to decide. It is difficult, in my opinion, because each case is a study in itself; no law will govern all. We can determine the shape and size of the pelvis, but we can not measure exactly the size and shape of the fœtal ovoid. Some years ago this Society discussed at length Forceps *vs.* Version, in papers ably presented by the late Drs. Goodell and Wilson. Harris, Noble, Hirst, Longaker, and others have recently contributed papers on symphyseotomy, and many successful Cæsarean and Porro operations have been reported. One of our Society was the first to perform symphyseotomy in preference to the induction of premature labor.

With this amount of literature contributed, we have taken no little part in setting the world to thinking of the best way to terminate difficult labor, and thereby place craniotomy in the position it should occupy—an operation to empty the uterus of its dead fœtus. Symphyseotomy has been resurrected through our appreciation of clean surgery, and it seems to me it has passed the experimental stage of its existence, although in the review of a popular textbook I read: "The furor that has attended the revival of this operation must consume itself in time, and then in the clear light of facts and indisputable statistics the right of the procedure to permanent position as an operative measure in obstetrics will be demonstrated,

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or the method relegated to its former oblivion." In reviewing the journals of the past year, I do not find as many cases reported as heretofore. Is this due to the fact that cases have not presented themselves for operation, or have the unsatisfactory results made the operator fearful of encountering again the same experience? As symphyseotomy is only indicated in pelves of moderate contraction, cases in which the forceps and version must also be entertained, it becomes a difficult problem to decide *when* it is indicated. In selecting the operation the history of previous labors, if any, will carry great weight. In following the work of the Philadelphia Lying-in Charity since this operation has been revived, I have several times met with cases of pelvic contraction indicating symphyseotomy, and have been in readiness to sever the pubic symphysis if necessary. But in each case, with the intervention of the forceps, labor was terminated successfully. I was about congratulating myself upon the good fortune which followed our work when the following case was referred to me:

Mrs. M., aged thirty-seven years, was admitted to the hospital May, 1895, and was expecting her delivery at any time. She was a native of Ireland, and had previously given birth to five children, all of the labors having been instrumental. In her first labor she was delivered by Dr. W. S. Stewart, the child living. The second labor, delivered by Dr. E. H. Steer, of Richmond Street, the child living. The third labor, she was attended by Dr. W. B. Scull, of Richmond Street, a difficult forceps operation, but the child was alive. Her fourth delivery, under the care of D. W. B. Scull, was in January, 1892. The doctor writes me that he had great difficulty in performing the forceps operation. The child was dead and for the first time in his experience the forceps slipped. The fifth delivery, under the care of Dr. Steer, on December 25, 1893, was again a difficult labor. The forceps failed, and he called to his assistance Dr. Charles P. Noble, who finally accomplished the delivery by version —another dead baby. The examination of the patient on admission to the hospital showed that we had to deal with a contracted flat pelvis.

Intraspinus measurement.....	26	centimetres.
Intracrystal measurement.....	27	"
External conjugate measurement.....	19	"
True conjugate measurement.....	8.25	"
Diagonal conjugate measurement.....	10	"

The child proved to be of good size and head well ossified. With this history of two dead babies, and with the counsel of Dr. Noble in regard to her last delivery, we decided to perform pubiotomy should she not be able to deliver herself. She fell in labor May 31, 1895, having had slight premonitory pains for a day. After seventeen hours of active labor, the head still remaining immovable at the brim of the pelvis, she was etherized, and an incision ten centimetres in length made over the pubic symphysis. The insertion of recti muscles severed, the finger readily slipped into the prevesical space.

After a little difficulty in finding the pubic symphysis, the Galbiati knife was passed behind and below the symphysis, and traction made from within out. Very soon we appreciated that the cartilaginous joint was yielding, and lateral pressure was made on each hip. Immediately on severing the joint, the head, which had been transverse at the brim, descended, the occiput rotating anterior. The forceps was now applied, and she was easily delivered of a slightly asphyxiated child, which soon recovered. Following the incision and manipulation there was considerable hæmorrhage, which was held in check during the forceps operation by gauze packing. The wound was closed with silkworm-gut sutures, the pelvis was bandaged with a many-tailed bandage, over this a canvas binder was tightly laced. The patient was catheterized for several days, complained of no discomfort, and made an uneventful recovery, her temperature never rising above 100° F. The sutures were removed on the tenth day, and at the end of the fourth week, the symphysis being firmly united, she was allowed to get out of bed. At the end of the fifth week she left the hospital feeling perfectly well.

I have intentionally delayed the report of this case that I might be able to see if any complication developed. It is now one year since the operation, and she is perfectly well. She walks well and has no bladder trouble.

In conclusion, I would state that, while I believe we will not often find it necessary to sever the pubic symphysis, it must be entertained in all cases of flat or contracted pelves, the true conjugate as low as seven or eight centimetres. The operation should be explained to the patient, that she may decide whether she is willing to take the additional risk for the sake of her infant.

Discussion.

Dr. Longaker: I had the pleasure of seeing this patient while she was in labor, and of examining her and seeing the operation. There was no doubt at all in my mind, and in the minds of the others who saw her, that the delivery of a living child without pubic section was an impossibility. At the time the pubic section was made the head was still quite high up. The subject of symphyseotomy, of course, brings up the entire matter of treatment and management of labor in cases of contracted pelves. I agree fully with Dr. Boyd in regard to the propriety of the operation in an appropriate case. I have myself operated three times with a successful result, so far as the infant is concerned, in two cases, and without any bad result for the mother in any of the three cases. The mothers all made good recoveries. In one the child was lost, because of persistent and prolonged traction of the forceps, which also complicated the convalescence very much. That is, not the symphyseotomy, but the forceps operation did harm.

The difficulty is in the decision as to the necessity of the operation, as to just what degree of contraction, as Dr. Boyd has said, will necessitate division of the pubic symphysis. And I realize that it is not always possible to say that a given case may not be delivered by version or by forceps. (The repeated application of forceps and prolonged traction certainly renders the result of symphyseotomy bad.) In two cases since my last operation I have erred in choosing the induction of premature labor, expecting that I would be able to deliver successfully. In these cases symphyseotomy should have been done. The want of success is only explainable by assuming the existence of contraction of the transverse diameters of the pelvis, which I did not appreciate from my measurements. The cases were instances of the generally contracted pelvis, and not of the simple flat, as I had concluded. This conclusion was based on the existence of normal or but slightly contracted external measurements. It is a well-known fact that narrowing of the transverse pelvic diameters renders the case unsuitable for version.

The practical point of the matter is the want of some means to ascertain the exact degree of pelvic contraction. I know of no better method practically than the manual, and I have used internal

pelvimeters. The pelvimeter of Hirst does not give me exact measurements.

Dr. PARISH: In reference to the relative merits of symphyseotomy and premature labor, I think so far as the delivery of a living child is concerned, probably in almost every instance in which symphyseotomy would promise good results in a case, if the case is under observation, premature labor at about the eighth month will give a living child with less risk to the mother. I have chosen this method in a few instances in preference to symphyseotomy. In these instances the child has been born alive, and is still living. Premature delivery in selected cases, and judiciously delivered, ought to give good results. If, however, in a premature delivery we apply forceps or, if it is necessary, do a version, the chances are the child will not be born living, for premature children do not stand forceps or version well. In premature labor it is safer to let Nature complete delivery after labor has begun. I think there is little risk to the mother if aseptic precautions are maintained. The old statistics showing great mortality in produced labors doubtless depended upon the septic complications at a time when asepsis was not appreciated or practiced.

Dr. NORRIS: I think there is no problem in practical obstetrics more difficult to decide than the proper course of management of labor obstructed by a contracted pelvis. If the case is seen before term, I agree with Dr. Parish that the induction of premature labor is not only justifiable but preferable. It has been so in my experience. The care of the child subsequent to its birth will have much to do with its future growth and development. A hospital case, born two or even three months before term, brought up in the slums of the city and improperly fed, stands a poor chance of survival; but with proper care of the infant—and I have carefully studied the statistics in this country as well as abroad—induction of premature labor shows a large proportion of children alive. So far as symphyseotomy is concerned, my experience is limited to two operations performed by myself, and I have assisted at six others, and this experience has convinced me that symphyseotomy is not a trifling operation by any means. In my own cases both the mothers survived, and are now perfectly well. The first child was born dead, the second child was born living, but died of an intercurrent pneumonia at the end of a year. In all the cases I have had an opportunity to observe there has been something about the

operation to convince me that it is not one whose maternal and infantile mortality can be classed with that of premature labor. To say, as has been claimed, that the mortality for the mother and child is better under symphyseotomy I think would not be borne out by statistics of published, not to mention unpublished, cases.

Again, as to the decision of method of procedure when the patient is in labor at term. There is a problem besides that of pelvic measurements. I take it we have means to measure accurately enough the capacity of the pelvis, and to estimate the conjugate diameter. Dr. Hirst's pelvimeter—a modification of Schultz' instrument—is a good instrument, but it should be remembered that one must know how to use it, and that its successful use requires two individuals who understand how to make the measurements. After we have obtained the conjugate diameter there are other problems. I recall a case with a conjugate of eight centimetres, in which the baby was very large; we trusted to version and lost the child. Autopsy showed a rupture of the longitudinal sinus.

The same woman came again to the Preston Retreat, and, in spite of the unfortunate result of the first delivery, the size of the child decided the choice of version, which was done with good results. The first baby weighed nine pounds, the second weighed seven pounds.

It is a good rule carefully to take the pelvic measurements, then to introduce the hand into the vagina, and by combined examination to notice how much protrusion of the head there is above the symphysis. By careful palpation of the child's cranium one can learn its approximate relative size to the pelvis; its hardness, and the separation of sutures which indicate the degree of compressibility of the head; and, finally, the distance between the sagittal suture and the sacral promontory when the head is partially engaged, will indicate whether or not the head can pass the obstruction safely. These things must be taken into consideration as well as the pelvic diameters.

When the pelvis measures over eight centimetres, and when the size of the head is judged to be approximately normal, oftentimes version will succeed, oftentimes forceps. In my own experience more children have been born alive with forceps than by version.

Then as to the position of the woman during labor. It is claimed for the Walcher posture that at least a centimetre is gained in the

conjugate diameter by allowing the woman's legs to hang extended over the edge of the bed, the buttocks being slightly elevated, and in high forceps operation I always resort to this posture with, I believe, distinct advantage. When we have a pelvis below eight centimetres, with a well-formed or large-sized child, the nearer will be the indication, I believe, for symphyseotomy. With a conjugate of seven centimetres or less, with the same conditions, the Cæsarean operation should be chosen if the case is in the hands of a man competent to do an operation of this kind.

I was much struck with Dr. Boyd's remarks as to fewer symphyseotomies having been recorded within the last year. I am glad this is so. Symphyseotomy is an operation which should be reserved for experts and for men with a large hospital experience to guide them. I believe that when the cases of minor degrees of pelvic deformity are critically studied the indication for symphyseotomy will very infrequently arise.

So far as induction of premature labor is concerned in my own hands, with the facilities offered by the incubator, special care, etc., I should prefer to induce labor rather than to allow the woman to go to term and do symphyseotomy.

Dr. L. J. HAMMOND: I would like to know what has been the experience of the members present who have done symphyseotomy at the subsequent deliveries—that is, whether the delivery was made any easier or not when another child was born. In a case I have in mind, where a living child was delivered after symphyseotomy, at the next delivery it was found absolutely impossible to get the same amount of separation, the result being a stillborn child delivered by axis-traction method after a very prolonged labor. It is perfectly natural to expect such a condition as this to occur in a goodly number of cases, since we would not expect to get the same mobility that we would at first operation, especially if sufficient inflammation be produced in the slightly mobile joints to cause complete ankylosis; the capacity of the pelvic outlet would, of course, under these conditions, be rather diminished than increased.

Dr. LONGAKER: My third operation was a second operation in the same patient; the amount of separation and amount of space gained was just as great as in the first operation. The convalescence in that patient was more satisfactory than in the first opera-

tion. Practically it was that of a normal delivery. This in answer to a point brought out by the last speaker.

Dr. BOYD: Symphyseotomy *vs.* Premature Labor has been discussed, I believe, by this Society. While induction of premature labor has its advantages, it must be remembered that it is not always easy to induce premature labor. The introduction of a bougie into the uterus is not always successful, and one difficulty that arises is the selection of time for operation. If the labor is induced much before the two hundred and fiftieth day of gestation, the chances for the child are not good. Then, again, if we err in the other direction, the object of the operation is lost. The case I operated on by symphyseotomy came to me late. I did not have an opportunity of considering the induction of premature labor, and, even if it could have been considered in that case, I would have followed the same course, considering the history. My experience with the induction of premature labor has not been very satisfactory. I induced labor about five or six months ago in a case with almost the same history as the one described this evening. Failing to bring on labor, after introducing the elastic bougie (it having remained twenty-four or forty-eight hours in the uterus), I found it necessary to give the patient ether and do dilatation of the cervix. This brought on labor, but, unfortunately, the breech presented, and through the rapid delivery that followed the cord became prolapsed, and this serious complication caused a disastrous result. From the history of the case I have narrated this evening the operation would not seem a difficult one. The only difficulty in this particular case was probably from my inexperience—that is, in not reaching the symphysis when the knife was first inserted.

CASE OF PORRO-CÆSAREAN SECTION.*

By G. M. Boyd, M. D.,

Physician to the Philadelphia Lying-in Charity.

An ideal operation is one which is premeditated. The patient's history is carefully studied, elaborate preparation is made, and with a corps of assistants and nurses in readiness, each step goes on uninterruptedly. In very many of our obstetric operations it is not possible to fix the day and hour; but we are called upon often at night, tired out with a long labor, to perform some of the gravest procedures in surgery. Sometimes it is after two or three have attempted the forceps operation, the patient already infected; again, it is after the patient has been in labor days, the attendant hoping Nature may still be equal to her task. The case which I have to relate is an illustration of this condition of affairs—an operation *in extremis*. Her history is as follows: Mrs. M., a colored married woman, a primipara, was admitted into the Philadelphia Lying-in Charity May 21, 1896. She had been in active labor two days. I found that she was pregnant at term, and that it was complicated by subperitoneal myomata; several tumors could be easily felt through the wall of the abdomen, one decidedly pedunculated. Fœtal heart could not be heard. On internal examination, the cervix was found to be dilated to the size of a silver dollar. A foul discharge issued from the uterus, indicating that decomposition had been going on some time. Careful measurement of the pelvis developed another phase of the case—we were not only dealing with a case of impossible labor, due to myomata, but with a flat rhachitic pelvis. The following were the measurements:

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* Read before the Philadelphia Obstetrical Society, June 4, 1896.

Intraspinus measurement	21	centimetres.
Intracrystal measurement	22	"
External conjugate measurement	17	"
Diagonal conjugate measurement	8	"
True conjugate measurement	6.5	"

Cæsarean section was immediately performed, the patient's condition not justifying delay. With the assistance and counsel of my colleague, Dr. Oliver Hopkinson, the abdomen was opened. The uterus, which was the seat of many fibroids (intramural, subperitoneal, and pedunculated), was then delivered. An incision was made into it, and with this a quantity of foul-smelling gas escaped. The dead infant was easily but slowly removed, that the uterine wall might contract gradually upon its contents, the placenta. Now the lower segment of the uterus was grasped by Dr. Hopkinson, and pressure made upon the uterine arteries. The removal of the uterus just above the internal os was rapidly and easily performed. The right and left broad ligaments tied and cut, the peritonæum was stripped from the front and back of the mass. A ligature was now thrown around both uterine arteries, and rapidly with the knife the uterus was removed, leaving a stump seven by five centimetres. The cervical canal was now disinfected, and a cuplike depression of the uterine tissue cut away. The cervical canal was closed, and finally the peritonæum brought together over the stump by interrupted sutures of fine silk. The peritoneal cavity was freely washed with large quantities of sterile water, and the abdominal wound closed with interrupted through-and-through silkworm-gut sutures. The patient's pulse was 150 before the operation, and when placed back in bed it was about 180. We rather despaired of her reacting from the shock of the operation, but to our surprise, at the end of twenty-four hours, her condition was much improved, temperature normal, pulse 140. Large rectal injections of normal salt solution did much, I believe, to bring about her good condition. She is now in her third week, and is rapidly convalescing. In practicing pelvimetry, we always feel a little doubtful of the accuracy of the measurement of the true conjugate, but, with the abdomen opened and the uterus removed, we were able to make a direct measurement of 6.5 centimetres.