

ceptional case where this organ is not excited to action by incising its wall. We have only to look at the effect of Cæsarean horn-rips, to determine the action of the uterus when it is opened before labor.

What is wanted in England, and especially in London, is more hopefulness in the operation, and this can only be begotten by a careful examination of the record of the past decade. Let someone collect the cases, and present the causes of success and failure; and it will soon be learned how death is to be avoided. The death-rate in London is placed conjecturally at 50 per cent.; but it should be known what it is positively. If it is as much as one-half, it can certainly be reduced. Recently a rachitic primipara from Yorkshire, of four feet six inches, was operated upon in Philadelphia, and is now rapidly recovering. We expected to save her and her child, and are not surprised at the result. If this can be attained here, upon an English woman, why not in London? It should be borne in mind that a very short labor is often the key-note to a recovery and a saved foetus.

Sänger, of Leipzig, and his followers in Germany, Austria, and America, have shown the capabilities of Cæsarean surgery where the cases are treated antiseptically and the uterine wound closed by multiple suturing of silk. Ovarian exsection has largely removed the old fear of celiotomy; and we know now that if the mother and child are in a hopeful condition, skill and care will usually avail to save both. There need be no fear that the uterine wound will not readily heal, for it has been found well closed, in a case that died in twenty-six hours, in Philadelphia, from conditions existing prior to the operation. There is nothing in the idea that the process of involution in the uterus is antagonistic to that of union by the first intention. When the uterine wound was not closed, or when it was sutured with catgut, gaping often took place, but it does not do this now, where the individual tension is made light by being divided among many sutures of carbolized silk. It is not required to use fifty stitches, as has been done in a few instances, but a dozen each of deep and superficial will make a good average. A dozen or even less of deep stitches alone have answered in the Cameron cases; but we prefer the example of Leipzig and Dresden, where the maternal loss has been $7\frac{1}{2}$ per cent. It should be remembered that a uterus heals the most readily whose muscular fibres have not been overtaxed and injured by long-continued and fruitless action, and it should be borne in mind that anæmia from hemorrhage, a dead foetus *in utero*, and the exhaustion of long labor, favor the production of sepsis, septic peritonitis, and fatal shock. Where the uterus contains a decomposing foetus, the Porro exsection should be performed as the only hope of avoiding death by septic absorption; cures have been secured in this way under very desperate conditions.—ED.]

CHAPTER VII.

CÆLIO-ELYTROTOMY [†] AND SYMPHYSEOTOMY.

BEARING in mind the great mortality attending the Cæsarean section, it is not surprising that obstetricians should have anxiously considered the possibility of devising substitutes which should afford the mother a better chance of recovery. Two proposals of this kind have been suggested, and from both great results were anticipated.

Cælio-elytrotomy.—One of these is the operation of cælio-elytrotomy as perfected by Thomas, of New York, in 1870. For some years subsequent to that date it attracted considerable attention and was frequently performed. The results were on the whole promising: out of fourteen cases, seven mothers recovered and nine children were born alive; and there was good reason to expect a still higher success as the technique of the operation was perfected and greater experience was acquired in its performance. The improved Cæsarean section and Porro's operation have, however, of late years shown such good results that cælio-elytrotomy has fallen into disfavor. It does not appear to have been performed since 1887, and as it is a complex and difficult procedure it is not likely again to be adopted; nor, with the lessened mortality of the Cæsarean section, is there any reason why it should be. I, however, retain the account of it as a matter of obstetric interest.

History.—The earliest suggestion of a procedure of this character seems to have been made by Joerg in the year 1806, who proposed a modified Cæsarean section without incision of the uterus, by the division of the linea alba and of the upper part of the vagina, the foetus being extracted through the cervix. This suggestion was never carried into practice, and it is obvious that it misses the one chief advantage of cælio-elytrotomy, the leaving of the peritoneum intact. In 1820 Ritgen proposed and actually attempted an operation much resembling Thomas's, in which section of the peritoneum was avoided. He failed, however, to complete it, and was eventually compelled to deliver his patient by the Cæsarean section. In 1823, Baudelocque the younger, independently conceived the same idea, and actually carried it into practice, although without success. Lastly, in 1837, Sir Charles Bell suggested a similar operation, clearly perceiving its advantages. Hence it appears that previous to Thomas's recent work in the matter, the operation was independently invented no less than three times. It fell, however, entirely into oblivion, and was only occasionally mentioned in systematic works as a matter of curious obstetric history, no one apparently appreciating the promising character of the procedure.

[† From *collio*, the abdomen; *elytron*, the vagina, and *tomos*, to cut.—ED.]

In the year 1870, Dr. T. Gaillard Thomas, of New York, read a paper before the Medical Association of Yonkers, entitled "Gastro-elytrotomy, a Substitute for the Cæsarean Section," in which he described the operation as he had performed it three times on the dead subject, and once on a married woman in 1870, with a successful issue as regards the child. It seems beyond doubt that Thomas invented the operation for himself, being ignorant of Ritgen's and Baudelocque's previous attempts, and it is certain, to quote Garrigues,¹ that to him "belongs the glory of having been the first who performed cœlio-elytrotomy so as to extract a living child from a living mother in his first operation, and of having brought both mother and child to complete recovery in his second operation."

Since Thomas's first case, the operation has been performed several times in America, and has found its way across the Atlantic, having been twice performed in England, by Himes in Sheffield, by Edis in London; and by Poulet in Lyons, France.

Nature of the Operation.—The object of cœlio-elytrotomy is to reach the cervix by incision through the lower part of the abdominal wall and upper part of the vagina, and through it to extract the fœtus as may most easily be done.

Advantages over the Cæsarean Section.—The advantages it offers over the Cæsarean section are that in dividing the abdomen the abdominal wall only is incised, and the peritoneum is left intact. The vagina is divided, but incision of the uterine parietes, which forms one of the chief risks of the Cæsarean section, is entirely avoided.

Cases Suitable for the Operation.—It may be broadly stated that cœlio-elytrotomy is applicable in all cases calling for the Cæsarean section when the mother is alive. In post-mortem extractions of the fœtus, the Cæsarean section, being the most rapid procedure, would certainly be preferable. Exceptions must be made for certain cases of morbid conditions of the soft parts which render delivery *per vias naturales* impossible, and in which cœlio-elytrotomy could not be performed, as in cases of tumor obstructing the pelvic cavity, also in carcinoma and fibroid of the uterus. When the head is firmly impacted in the pelvic brim, and cannot be dislodged, the operation would be impossible, as the vagina could not be incised. Unlike the Cæsarean section, the operation cannot be performed twice on the same patient, at least on the same side, since adhesions left by the former incisions would prevent the separation of the peritoneum and division of the vagina. It remains to be seen whether in certain cases of extreme deformity, with pendulous abdomen and distorted thighs, the site of incision might not be so difficult to reach as to render the necessary manœuvres impossible.

Anatomy of the Parts concerned in the Operation.—It will facilitate the proper comprehension of the operation, and render an avoidance of its possible dangers more easy, if the anatomical relations of the parts concerned are briefly described.

The abdominal incision extends from a point an inch above the anterior superior iliac spine, and is carried, with a slight downward

¹ New York Med. Journ., 1878, vol. xxviii. pp. 337, 449.

curve, parallel to Poupart's ligament until it reaches a point one inch and three-quarters above, and to the outside of, the spine of the pubes. Beyond the latter point it must not extend, so as to avoid the risk of wounding the round ligament and the epigastric artery. In this incision the skin, the aponeurosis of the external oblique, and the fibres of the internal oblique and transversalis muscles are divided. The rectus is not implicated. After the muscles are divided the transversalis fascia is reached. It is fortunately rather dense in this situation, and is separated from the peritoneum by a layer of connective tissue containing fat.

The superficial epigastric artery is necessarily divided, but is too small to give any trouble. The internal epigastric is fortunately not divided, but is so near the inner end of the incision that it may accidentally be so. In one of Dr. Skene's operations it was laid bare. Starting from the external iliac, about a quarter of an inch above Poupart's ligament, it runs downward, forward, and inward to the ligament, thence it turns upward and inward, in front of the round ligament and to the inner side of the internal abdominal ring, behind the posterior layer of the sheath of the rectus muscle, which it finally enters. The circumflex iliac artery also rises from the external iliac a little below the epigastric. It runs between the peritoneum and Poupart's ligament until it reaches the crest of the ilium, to the inner side of which it runs. It thus lies altogether below the line of the incision, and is not likely to be injured.

After the transversalis fascia is divided the peritoneum is reached, and is readily lifted up intact, so as to expose the upper part of the vagina, through which the fœtus is extracted. It is fortunate, as facilitating this manœuvre, that the peritoneum is much more lax than in the non-pregnant state, and it has been found very easy to lift it out of the way in all the operations hitherto performed.

The division of the vagina is the part of the operation likely to give rise to most trouble and risk. It is to be noted that, in cases of pelvic contraction calling for this operation, the uterus, with its contents, will be abnormally high and altogether above the pelvic brim; the vagina is, therefore, necessarily elongated and brought more readily within reach. It is enlarged in its upper part during pregnancy, and thrown into folds ready for dilatation during the passage of the child. It is loosely surrounded by the other tissues, and is composed of muscular fibres, easily separable, and an internal mucous layer. Its vascular arrangements are very complex, and the risk of hemorrhage is one of the prominent difficulties of the operation.

In Baudelocque's attempt, in which the vagina was cut instead of torn, the loss of blood was so great as to lead to a discontinuance of the operation. The arteries are numerous, consisting of branches from the hypogastric, inferior vesical, internal pudic, and hemorrhoidal. The veins form a network surrounding the whole canal, but are largest at its extremities, so that it is desirable to open the vagina as low down as possible.

Behind the vagina lies the pouch of peritoneum known as Douglas's space, and below that the rectum. In front of it lies the bladder, and

the risk of injuring that viscus or the ureter entering it constitutes another of the dangers of the operation. The relations of these parts have been specially studied by Garrigues,¹ with the view of facilitating the safe performance of the operation, and I quote his description:

"The anterior superior surface of the vagina is, in its upper part, bound by loose connective tissue to the bladder on a surface that has the shape of a heart. In the lower or anterior part, the boundary line of this surface runs parallel to, and a little outside of, the *trigonum vesicale*. In the upper part it follows the outline of the vagina, from which it passes over to the cervix. The distance from the internal opening of the urethra to the neck of the womb is one inch and a quarter (3.2 centimetres). The bladder extends five-eighths of an inch (1.5 centimetres) upon the cervix. It is very liable to be reached by the vaginal rent, if the latter is made too high up or too horizontal. The lower part of the antero-superior wall carries in the middle line the *urethra*. In the uppermost part, a little outside of and behind the bladder, lies the *ureter*. In order to avoid the ureter and the bladder, the incision of the vagina should be made nearly an inch and a half (3.8 centimetres) below the uterus, and in a direction parallel to the ureter and the boundary line between the bladder and the vagina."

The Operation.—The operation has hitherto been performed chiefly on the right side. In consequence of the position of the rectum on the left, it seemed doubtful if the difficulties of performing it on that side would not render the operation impossible. It has, however, been performed three times on the left side, and apparently as easily as on the right. For the proper performance of the operation four assistants are necessary, besides one who administers the anaesthetic. The patient is placed on her back on the operating-table, with the pelvis raised and in the same position as for ovariectomy. In consequence of access of air *per vaginam* strict antiseptic precautions cannot be adopted. Before commencing the operation the cervix is dilated as much as possible by Barnes's bags, assisted, if necessary, by digital dilatation.

The operator stands on the right side of the patient, while an assistant, standing on her left, lays his hand on the uterus and draws it upward and to the left, so as to put the skin on the stretch. The incision is commenced at a point one inch above the anterior superior spine of the ilium, and is carried inward in a slightly curved direction until it reaches a point one and three-quarters inches above and outside the spine of the pubes. The skin, muscular and aponeurotic tissues are carefully divided, layer by layer, any arterial branches being secured as they are severed, until the transversalis fascia is reached. This is raised by a fine tenaculum, and an aperture is made in it through which a director is introduced, and on this the fascia is divided in the whole length of the superficial incision. The operator now separates the peritoneum from the transversalis and iliac fascia with his fingers, and an assistant, placed on his left, elevates it, as well as the contained intestines, by means of a fine warmed napkin, and keeps it

¹ Loc. cit., p. 479.

well out of the way during the rest of the operation. A third assistant now introduces a silver catheter into the bladder, and holds it in the position of the boundary line between it and the vagina, and below the uterus.

A blunt wooden instrument like the obturator of a speculum is introduced into the vagina, which is pushed up by it above the ilio-pectineal line. On this an incision is made by Paquelin's thermo-cautery heated to a red heat only, as far below the uterus as possible, and parallel to the ilio-pectineal line and the catheter felt in the bladder. When the vagina has been burnt through, the index fingers of both hands are pushed through the incision, and the vagina torn through as far forward as is deemed safe by the guide of the catheter in the bladder, and as far backward as possible. When this has been done the uterus is depressed to the left, and the cervix lifted into the incision by the fingers, and the membranes are ruptured. Through the cervix thus elevated the child is extracted, according to the presentation, either by simple traction, by the forceps, or by turning. Before concluding the operation the bladder should be injected with milk to make sure that it has not been wounded. Should it be so, the laceration may be at once united by carbolized gut. The principal risk at this stage is hemorrhage from the vaginal vessels, which, however, fortunately did not give rise to much trouble in any of the recent operations. If it occurs it must be dealt with as best we can, either by ligature, by the actual cautery, or by thoroughly plugging the vaginal wound with cotton both through the incision and *per vaginam*. If the latter be not necessary, the wound should be cleaned by injecting a warm solution of weak carbolized water (2 per cent.), its edges united by interrupted sutures, and dressed as is deemed best. The subsequent treatment must be conducted on general surgical principles, and will much resemble that necessary after other severe abdominal operations, such as ovariectomy. The vagina should be gently syringed two or three times daily with a weak antiseptic lotion. The diet should be light and nutritious, chiefly consisting of milk, beef-tea, and the like. Pain, pyrexia, etc., must be treated as they arise.

Symphyseotomy.—The second operation requires a more extended notice than in former editions of this work, since it has been revived within the last few years, chiefly under the auspices of Professor Morisani, of Naples, and has now been performed in a large number of cases, as an alternative to craniotomy, and with very considerable success.

Its History.—In 1768 Sigault, then a medical student in Paris, suggested *symphyseotomy*, which consists in a division of the symphysis pubis, with a view of allowing the pubic bones to separate sufficiently to admit of the passage of the child.^[1] Although at first strongly opposed, it was subsequently ardently advocated by many obstetricians, and frequently resorted to on the Continent. In 1778 the operation was performed thirteen times in Germany, France, and Belgium; once only in England, in 1782. Since that time it gradually fell into dis-

[¹ The proposition was made originally in the work of Severin Pinesu, which he is known to have had.—Ed.]

favor, and may be said to have become practically obsolete, a few cases only having occasionally been operated on in Italy, where suitable cases of pelvic deformity appear to be very common. In 1863 Prof. Morisani, of Naples, undertook a study of the operation on the dead subject, and came to the conclusion that it had a sound basis, and in 1866 he operated on a living woman, saving both the mother and child. Since January 1, 1886, it had been performed, up to the end of 1892, in 115 cases in Europe and America, with 9 maternal deaths and 24 children lost. Up to this time it has been attempted but once each in Ireland and England.

These figures are certainly very striking, and the remarkably diminished mortality is beyond doubt due to the application of careful antisepsis and improved technique. The maternal mortality will certainly contrast favorably with that attending an equal number of severe craniotomies, in all of which the children would have been sacrificed. It is to be noted, however, that this operation can never take the place of the Cæsarean section in extreme cases of pelvic deformity, but is rather a substitute for craniotomy in slighter cases, chiefly in flattened pelvis, which are just too small to admit of the passage of a living child. It is not applicable in cases of obliquely contracted pelvis, or in cases in which delivery is obstructed by tumors of any kind, bony growths, or carcinoma. It has also been suggested in certain cases in which the head is impacted in consequence of malpresentation, such as mento-posterior positions of the face, or in brow presentations, in which craniotomy would otherwise be necessary.¹ Any alternative that will avoid the destruction of a living fetus is surely well worthy of consideration, and there can be little doubt that the recent happy results following the revival of symphyseotomy will lead to its adoption in suitable cases. The operation itself is by no means difficult, and it requires less surgical skill than the Cæsarean section, or Porro's operation, or a difficult craniotomy.

Limits of the Operation.—Professor Morisani lays down two and five-eighths inches as the limits below which symphyseotomy is impracticable. It would, of course, be a matter of great moment to ascertain the exact dimensions of the sacro-pubic diameter accurately, whenever the operation is contemplated, but as the necessity for this may not arise until the patient is actually in labor, this may not always be practicable. It is, however, in cases with a conjugate larger than this, in which we would otherwise be obliged to resort to perforation, that this alternative will most frequently present itself in the hope of saving the life of the child. It is in such cases as the following, quoted by Harris, in which the contraction is not excessive, that symphyseotomy will probably find its best application: "The patient was in labor for the third time. Her first child having been a large one, perished; the second being much smaller, lived; and the third was again too large to pass. She had a diagonal conjugate of 100 millimetres (four inches), and probably three and three-quarters inches in the true conjugate. The fetus, which was arrested at the superior

¹ "Symphyseotomy—a Successful Case," by J. Edwin Michael, M.A., M.D. Amer. Journ. of Obstet., February, 1896, p. 183.

strait, was delivered in fifteen minutes, by the vertex under manual assistance, after her pubes had been opened by the knife. The child

FIG. 200.

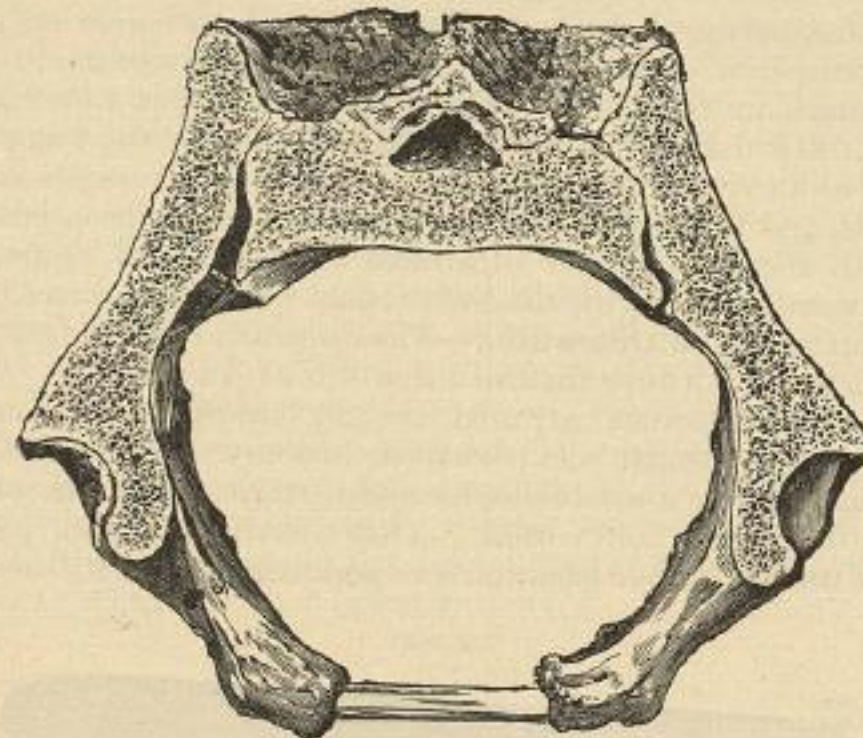
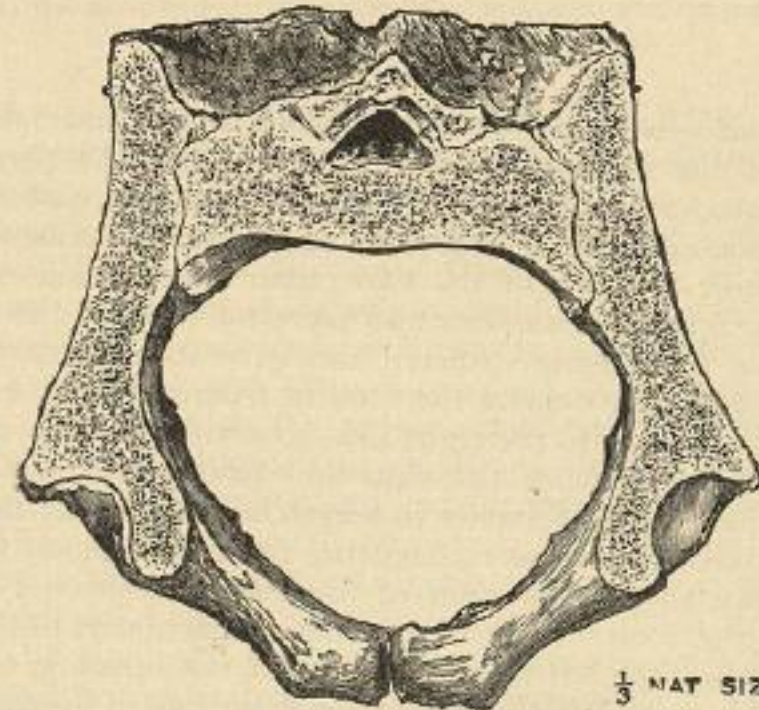


FIG. 201.



$\frac{1}{3}$ NAT SIZE

Sections of pelvic brim to illustrate symphyseotomy. (After PINARD.)

was saved instead of perishing under the perforator; the mother made a good recovery, and was well in thirty days."

Having no personal experience of this operation, I can give no opinion on its merits, beyond the obvious remark that anything that

tends to minimize the resort to the horrible operation of craniotomy, without materially increasing the risk to the mother, which the figures so far show that this operation promises to do, is well worthy of the most serious study and consideration.

The accompanying diagrams (Figs. 200, 201) will give an idea of the increased pelvic dimensions obtained by symphyseotomy. It represents sections at the pelvic brim made on a subject who had died nine days after delivery at term. After division of the symphysis a separation of three inches took place, which is the average amount to be expected, and this gives about an inch gain on all the pelvic diameters. This increase is well illustrated by the second figure, which shows the same section with the pubic bones placed in contact.

Description of the Operation.—The operation itself is very simple. I cannot describe it better than in the words of Dr. Harris:

"The armamentarium required is very simple, viz.: a scalpel; Galbiati's probe-pointed sickle-shaped bistoury¹ (Fig. 202); some hæmostatic forceps; a needle-holder and needles; a metallic catheter; ligature silk; gauze and cotton. After sterilizing these, place the parturient woman on her back, on an operating-table, with her knees

FIG. 202.



Galbiati's sickle-shaped bistoury.

drawn up and separated, shave the mons Veneris and labia majora, and disinfect the supra-pubic region, the vulva, the perineum, and vulvo-vaginal canal. Examine the depth, thickness, and direction of the symphysis, and search out the fossa in its superior edge which marks the point of union of the two pubic bones; then examine the inferior margin and the anterior and posterior faces of the pubes.

"Introduce the female catheter and give it into the hand of an assistant, that he may depress the urethra from the pubic arch, and at the same time carry it to the right side, to save it from injury. Make a vertical incision through the skin and fat above the pubes, about two to two and one-half inches in length, ending about three-fourths of an inch above the symphysis, cutting the tissues gently and passing in a line down to the insertion of the recti muscles. Detach for a short space the recti muscles from their attachment to the two ossa pubes; introduce the left index finger into the opening, and separate the retro-pubic tissue. Then apply the palmar face of the finger directly against the posterior face of the symphysis, hooking with it the inferior margin of the articulation, while the assistant attends to the catheter as stated. The operator then introduces the Galbiati bistoury and hooks it around the articulation, cutting the interosseous ligaments

¹ An ordinary probe-pointed curved bistoury may be used instead of this special knife.

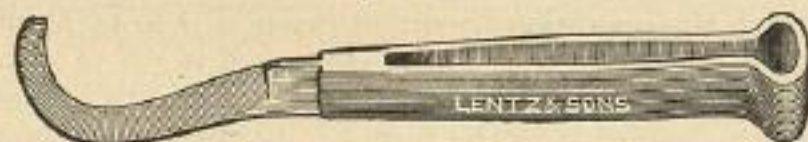
and cartilage from within outward and below upward. When the section has been completed it will be known by a creaking sensation and a separation of the bones from one and one-quarter to one and one-half inches.

"After this step, cover the wound with the gauze, dipped in a bichloride solution of 1:4000, and attend to the delivery of the fetus, having at the same time the separation of the innominate antagonized by pressure with the hands of assistants. During the passage of the head ascertain the amount of pubic separation; spray the vagina; and when the placenta is delivered, introduce six or eight interrupted silk sutures into the edges of the wound; dress it with sublimated cotton, 1:2000, and bandage the pelvis and lower extremities."

Pinard¹ prefers to divide the pubes from without inward with a straight bistoury, protecting the subjacent structures with the index finger of the left hand previously passed behind it.

One would naturally fear that after the section of the symphysis, and the strain put on the sacro-iliac joints by the separation of the innominate bones, subsequent difficulties in locomotion would arise. No mention is made of this in the cases hitherto published, but the point appears to require further investigation.^[2]

[FIG. 203.]



Harris's symphyseotomy bistoury. This is modelled to conform with the posterior curve of the symphysis from above downward.—Ed.]

After the incision is made and the symphysis separated, it may, of course, be necessary to complete delivery either by the high forceps operation or by version.

[Progress and Results of Symphyseotomy.—Until February 4, 1892, this operation was for many years confined to Italy, and for twenty-seven years almost entirely to Naples, in which city there were twelve women delivered under it in 1891. On the date mentioned it reappeared in Paris, and soon commenced to be performed in other countries; but not with the success that had attended it in Italy during 1886-91. Although originally a French operation, it had fallen into very bad repute, and had for many years been considered as beyond the pale of obstetric surgery. In its restoration to favor it again became the operation of Sigault, and was performed by direct incision, and not by the sub-ossæous method, which under Morisani and Novi, of Naples, in an experience of twenty-six years (1866-91), had procured it a reputation of success and safety. The successes of Pinard, of Paris, gave the method a new impetus, and it has rapidly spread into other countries, where it has been performed with varying success; but in no locality with the low death-rate of Italy, where 46

¹ Symphyseotomy at the Clinique Bandelocque, Lancet, February 18, 1893.

² Difficulty in locomotion has very rarely followed the operations under antiseptics and pelvic fixation, and the disability has been temporary.—Ed.]

deliveries cost the lives of only 2 women and 5 children, dating from 1886.

Although Prof. Pinard did not lose a case until his twentieth died of direct sepsis, no other operator or country out of Naples had this measure of success. France lost 5 out of her first 35, including 8 successes of Pinard; and the United States lost 4 out of her first 25. In sixteen months (February 1, 1892, to June 1, 1893) the operation was tested in eleven countries and upon more than 150 women.

If we include the Italian operations of 1886-91, we find that, up to June of this present year, there were 25 women and 37 children lost under 205 symphyseotomic deliveries, according to the record made by Neugebauer, of Warsaw, with my assistance. This would leave, without the 46 of Italy, 23 deaths in 159 women, and 32 children lost. Not a very encouraging record when compared with the Cæsarean results of Leipzig and Dresden, a mortality of 7 per cent.

Symphysiotomy, although an old operation, is still in the experimental period of its existence in all localities outside of Naples, and we should, in our country at least, be content to follow the directions given by Morisani, as already stated. Several prominent operators have been very much disappointed with the results attained in their hands, while others, more successful, are disposed to commend the method. In our own country it is believed to have a promising future; to secure which the operation by direct incision is to be avoided, as the results in France and Vienna do not commend it.

Having for twelve years studied this operation by correspondence, I am inclined to regard it in the light of its measure of possibility, as shown by the work of the last six and one-half years in Naples, rather than by the actual average of success elsewhere in the past eighteen months. There does not now appear to be any element of danger arising from injury done to the sacro-iliac synchondroses. What they have most to fear in Continental maternities is septic poisoning from the wound in the symphysis, or from lacerations of the cervix, vagina, vulva, and perineum, all of which sometimes occur in the same subject, and particularly in rachitic primiparæ. It should be borne in mind that in cases where the pelvis is much contracted, the vagina and vulva will usually be found to be of the same character, and an operator cannot be too cautious in making slow and interrupted traction with his forceps.

The minimum conjugate diameter of Morisani of two and five-eighths inches is too small for this country, where the fetus is on the average of larger size, and should be fixed at two and three-quarters inches; and even this will be found a dangerous measure where the fetus is a male and above the average weight. If a woman is operated upon *in good season*, and by the sub-osseous section, she should run but a moderate risk for her life, and her child likewise; although the latter has a less degree of safety. According to Dr. Franz Neugebauer, the general average of death for the women is now 12 per cent., and for the children, 18. In the United States the average has been, respectively, 16 per cent. and 24 per cent. This statement has disappointed many of our accoucheurs; but if they will examine into the

causes of death in the four women, they will find encouragement rather than the reverse. Like the Cæsarean section, much will depend upon the length of labor and the condition of the patient when operated on for securing a successful issue. Symphyseotomy ought to be less dangerous than the Cæsarean section has been in our country; and nothing short of this should satisfy those who propose to substitute it for craniotomic infanticide. It is a less formidable operation, and women make less objection to it than they do to the abdominal delivery. It requires less skill in its execution, and is not so shocking in its effects upon the nerves of the accoucheur; but take the whole delivery in many cases, and it will be found that no little skill is required to secure a favorable result.

Operation after Induced Labor.—Where the true conjugate is below the minimum measure, the disproportion between it and the size of the foetal head may be overcome by bringing on labor at the end of the eighth month or a little later. Children thus delivered require extra care in raising, and in the class to which they belong are very often lost at an early period. In exceptional instances they have done remarkably well; but it is a question to be considered, whether it would not be better in the average of cases to deliver by the Cæsarean section at full term.

Unilateral Ischio-pubiotomy.—Following a suggestion of Farabeuf, Prof. Pinard operated upon a V-para of thirty-two at the Clinique Baudelocque on November 9, 1892, so as to deliver a living male fetus, weighing nearly nine pounds, through an oblique Nægele pelvis. He cut down upon the ischio-pubic ramus of the ankylosed side, and divided it with a chain-saw; and repeated a section of the horizontal ramus of the corresponding os pubis at a distance of 5 cm. from the symphysis. This enabled him to open out the front of the pelvis by the separation of the free synchondrosis of the opposite side under the traction of Tarnier's forceps; and a separation of the os pubis to the extent of 4 cm. gave room for the passage of the fetus. The wound healed by the first intention in eight days; the woman sat up in thirty-two days, and walked about without inconvenience in two months, the child then weighing eleven pounds.¹ This, in principle, was a repetition of the *bi-pubiotomy* of Galbiati, of Naples, performed upon both sides on March 30, 1832, with a fatal result; the dwarf of three and one-half feet, having a one-inch conjugate, dying in four days. The operation of Farabeuf had the advantages of antiseptics, and of a slight disproportion of size between the pelvic canal and foetal head.

—ED.]

¹ *Annales de Gynécologie et d'Obstétrique*, Février, 1893, pp. 139-152.