sion of the child with little or no preliminary warning. I have known a child to be expelled into the pan of a water-closet, the only previous indication of commencing labor being a slight griping pain, which led the mother to fancy that an action of the bowels was about to take place. More often there is what may be described as a storm of uterine contractions, one pain following the other with great intensity, until the fœtus is expelled. The natural effect of this is to produce a great amount of alarm or nervous excitement, which of itself forms one of the worst results of this class of labor. It is under such circumstances that temporary mania occurs, produced by the intensity of the suffering, under which the patient may commit acts, her responsibility for which may fairly be open to question.

Little Treatment Possible.—Little can be done in treating undue rapidity of labor. We can, to some extent, modify the intensity of the pains by urging the patient to refrain from voluntary efforts, and to open the glottis by crying out, so that the chest may no longer be a fixed point for muscular action. Opiates have been advised to control uterine action, but it is needless to point out that, in most cases, there is no time for them to take effect. Chloroform will often be found most valuable, from the rapidity with which it can be exhibited; and its power of diminishing uterine action, which forms one of its chief drawbacks in ordinary practice, will here prove of much service.

CHAPTER X.

LABOR OBSTRUCTED BY FAULTY CONDITION OF THE SOFT PARTS.

Rigidity of the Cervix a Frequent Cause of Protracted Labor.—One of the most frequent causes of delay in the first stage of labor is rigidity of the cervix uteri, which may depend on a variety of conditions. It is often produced by premature escape of the liquor amnii, in consequence of which the fluid wedge, which is Nature's means of dilating the os, is destroyed, and the hard presenting part is consequently brought to bear directly upon the tissues of the cervix, which are thus unduly irritated, and thrown into a state of spasmodic contraction. At other times it may be due to constitutional peculiarities, among which there is none so common as a highly nervous and emotional temperament, which renders the patient peculiarly sensitive to her sufferings, and interferes with the harmonious action of the uterine fibres. The pains, in such cases, cause intense agony, are short and cramp-like in character, but have little or no effect in producing dilatation; the os often remaining for many hours without any appreciable alteration, its edges being thin and tightly stretched over the head.

Less often, and this is generally met with in stout, plethoric women, the edges of the os are thick and tough.

The effects of prolongation of labor from this cause will vary much under different circumstances. If the liquor amnii be prematurely evacuated, the presenting part presses directly upon the cervix, and the case is then practically the same as if the labor was in the second stage. Hence grave symptoms may soon develop themselves, and early interference may be imperatively demanded. If the membranes be unruptured, delay will be of comparatively little moment, and considerable time may elapse without serious detriment to either the mother or child.

The treatment will naturally vary much with the cause and the state of the patient. In the majority of cases, especially if the membranes be intact, patience and time are sufficient to overcome the obstacle; but it is often in the power of the accoucheur materially to aid dilatation by appropriate management. Sometimes Nature overcomes the obstruction by lacerating the opposing structures; and cases are on record in which even a complete ring of the cervix has been torn off and come away before the head.

Many remedies have been recommended for facilitating dilatation, some of which no doubt act beneficially. Among those most frequently resorted to was venesection, and with it was generally associated the administration of nauseating doses of tartar emetic. Both these acted by producing temporary depression, under which the resistance of the soft parts was lessened. They probably answer best in cases in which there was a rigid and tough cervix; and they might prove serviceable, even yet, in stout, plethoric women of robust frame. Practically they are now seldom, if ever, employed, and other and less debilitating remedies are preferred. The agent, *par excellence*, most serviceable is chloral, which is of special value in the more common cases in which rigidity is associated with spasmodic contraction of the muscular fibres of the cervix. Two or three doses of fifteen grains, repeated at intervals of twenty minutes, are often of almost magical efficacy, the pains becoming steady and regular, and the os gradually relaxing sufficiently to allow the passage of the head. Should the chloral be rejected by the stomach, it may be satisfactorily administered per rectum. Chloroform acts much in the same way, but on the whole less satisfactorily, its effects being often too great; while the peculiar value of chloral is its influence in promoting relaxation of the tissues, without interfering with the strength of the pains.

Various local means of treatment may be also advantageously used. One is the warm bath, which is much used in France. It is of unquestionable value where there is mere rigidity, and may be used either as an entire bath, or as a hip-bath, in which the patient sits from twenty minutes to half an hour. The objection is the fuss and excitement it causes, and, for this reason, it is an expedient seldom resorted to in this country. A similar effect is produced, and much more easily, by a douche of tepid water upon the cervix. This can be very easily administered, the pipe of a Higginson's syringe being guided up to the cervix by the index finger of the right hand, and a stream of water

projected against it for five or ten minutes. Smearing the os with extract of belladonna is advised by Continental authorities, but its effects are more than doubtful. Horton[1] advocates the injection into the tissue of the cervix of $\frac{1}{40}$ of a grain of atropine by means of a hypodermatic syringe, and speaks very favorably of the practice.

Artificial Dilatation.—Artificial dilatation of the cervix by the finger has often been recommended, and has been the subject of much discussion, especially in the Edinburgh school, where it was formerly commonly employed. It is capable of being very useful, but it may also do much injury when roughly and injudiciously used. The class of cases in which it is most serviceable are those in which the liquor amnii has been long evacuated, and in which the head, covered by the tightly stretched cervix, has descended low into the pelvic cavity. Under these circumstances, if the finger be passed gently within the os during a pain, and its margin pressed upward and over the head, as it were, while the contraction lasts, the progress of the case may be materially facilitated. This manœuvre is somewhat similar to that which has been already spoken of, when the anterior lip of the cervix is caught between the head and the pubic bone, and, if properly performed, I believe it to be quite safe, and often of great value. It is not, however, well adapted for those cases in which the membranes are still intact, or in which the os remains undilated when the head is still high in the pelvis. When there is much delay under these conditions, and interference of some kind seems called for, the dilatation may be much assisted by the use of caoutchouc dilators, described in the chapter on the induction of premature labor, which imitate Nature's method of opening up the os, and also act as a direct stimulant to uterine contraction. But it should be remembered that it is precisely in such cases that delay is least prejudicial. If, however, the os be excessively long in opening, its dilatation may be safely and efficiently promoted by passing within it, and distending with water, one of the smallest-sized bags; and, after this has been in position from ten to twenty minutes, it may be removed, and a larger one substituted.

Rigidity depending upon Organic Causes.—Every now and again we meet with cases in which the obstacle depends upon organic changes in the cervix, the most common of which are cicatricial hardening from former lacerations; hypertrophic elongation of the cervix from disease antecedent to pregnancy; or even agglutination and closure of the os uteri. Cicatrices are generally the result of lacerations during former labors. They implicate a portion only of the cervix, which they render hard, rigid, and undilatable, while the remainder has its natural softness. They can readily be made out by the examining finger. A somewhat similar, but much more formidable, obstruction is occasionally met with in cases of old-standing hypertrophic elongation of the cervix, which is generally associated with prolapse. In most cases of this kind the cervix becomes softened during pregnancy, so that dilatation occurs without any unusual difficulty. But this does not always happen. A good example is related by Mr.

[1] Amer. Journ. of Obstet., 1878, vol. xi. p. 482.

Roper, in the seventh volume of the *Obstetrical Transactions* (p. 233), in which such a cervix formed an almost insuperable obstacle to the passage of the child.

Carcinoma of the cervix uteri, which produces extensive thickening and induration of its tissues, and even advanced malignant disease of the uterus, is no bar to conception. The relations of malignant disease to pregnancy and parturition have recently been well studied by Dr. Herman.[1] He concludes that cancer renders the patient inapt to conceive, but that when pregnancy does occur there is a tendency to the intra-uterine death and premature expulsion of the fœtus, and the growth of the cancer is accelerated. When delivery is accomplished naturally there is generally expansion of the cervix by fissuring of its tissue, but the harder forms of cancer may form an insuperable obstacle to delivery.

Agglutination of the margins of the os uteri is occasionally met with, and must, of course, have occurred after conception. It is generally the result of some inflammatory affection of the cervix during the early months of gestation; and I have known it recur in the same woman in two successive pregnancies. Usually it is not associated with any hardness or rigidity, but the entire cervix is stretched over the presenting part, and forms a smooth covering, in which the os may only exist as a small dimple, and may be very difficult to detect at all. Occlusion of the os uteri from inflammatory change sometimes so alters the cervix that no sign of the original opening can be discovered; and in two such instances the Cæsarean operation has been performed in the United States, by which the women were saved.[2]

Their Treatment.—Any of these mechanical causes of rigidity may at first be treated in the same way as the more simple cases; and with patience, the use of chloral and chloroform, and of the fluid dilators, sufficient expansion to permit the passage of the head will often take place. But if these methods produce no effect, and symptoms of constitutional irritation are beginning to develop themselves, other and more radical means of overcoming the obstruction may be required.

Under such circumstances incision of the cervix may be not only justifiable but essential, and it frequently answers extremely well. On the Continent it is resorted to much more frequently and earlier than in this country, and with the most beneficial results. The operation offers no difficulties. The simplest way of performing it is to guard the greater portion of the blade of a straight blunt-pointed bistoury by wrapping lint or adhesive plaster around it, leaving about half an inch of cutting edge toward its point. This is guided to the cervix, on the under surface of the index finger, and three or four notches are cut in the circumference of the os to about the depth of a quarter of an inch. Very generally, especially when the obstruction is only due to old cicatrices, the pains will now speedily effect complete expansion, which may be very advantageously aided by applying the hydrostatic dilators. When the obstruction is due to carcinomatous infiltration or inflammatory thickening, the case is much more complicated, and will pain-

[1] Obst. Trans. for 1878, vol. xx. p. 191.
[2] Harris's note to second American edition.

fully tax the resources of the accoucheur. If it is possible, the disease should be removed as much as can be safely done during pregnancy, which should also be brought to an end before the full period. During labor, incisions should form a preliminary to any subsequent proceedings that may be necessary, as they are, at the worst, not likely to increase in the least the risk the patient has to run, and they may possibly avert more serious operations. In the case of malignant disease the risk of serious hemorrhage, from the great vascularity of the tissues, must not be forgotten, and, if necessary, means must be taken to check this by local styptics, such as perchloride of iron. If incision fail, and the state of the patient demands speedy delivery, the forceps may be applied, and Herman thinks they are, as a rule, better than turning. He also maintains that there is little difference in the risk to the mothers between craniotomy and the Cæsarean section, and that the possibility of saving the child in cases in which incisions have failed should induce us to prefer the latter.

[The experience of our country is decidedly in favor of the improved Cæsarean operation in cases of cancer of the cervix, and of making the section before the pains of labor have commenced, or as soon as possible thereafter. There is no reason why such cases should not be saved, as the uterine wound heals readily, to which I can bear witness, having seen two recoveries under Prof. Goodell. We believe this method of delivery to be preferable to the old *hysterotomy*, or incision of the cervix, and to craniotomy, as the passage of the fœtus through the diseased os uteri is attended with considerable risk to the mother. Several women and children have been saved under *cœlio-hysterotomy* in our country.—Ed.]

Application of the Forceps within the Cervix.—Before performing craniotomy, when the os is sufficiently open, a cautious application of the forceps is quite justifiable. Steady and careful downward traction, combined with digital expansion, has often enabled a head to pass with safety through an os that has resisted all other means of dilatation, and the destruction of the child has thus been avoided. If, indeed, the os appear to be dilatable, this procedure may advantageously be adopted before incision, and, as a matter of fact, it is commonly practised in the Rotunda Hospital. An operation involving, beyond doubt, of itself some risk, and requiring considerable operative dexterity, would naturally not be lightly and inconsiderately undertaken. But when it is remembered that the alternative is the destruction of the child, the risk of exhaustion, and at least as great mechanical injury to the mother, its difficulty need not stand in the way of its adoption.

Treatment when Occlusion of the Os exists.—When the os is apparently obliterated, incision is the only resource. Before resorting to it the patient should be placed under chloroform, and the entire lower segment of the uterus carefully explored. Possibly the aperture may be found high up, and out of reach of an ordinary examination, or we may detect a depression corresponding to its site. A small crucial incision may then be made at the site of the os, if this can be ascertained; if not, at the most prominent portion of the cervix. Very

generally the pains will then suffice to complete expansion, which may be further aided by the fluid dilators.

Ante-partum Hour-glass Contraction.—Dr. Hosmer[1] has drawn attention to a hitherto undescribed species of dystocia, which he terms "*ante-partum hour-glass contraction*," and which he believes to depend on constriction of the uterine fibres at the site of the internal os uteri. Dr. Blundell refers to it in his work on obstetrics (1840) under the title of "Circular Contraction of the Middle of the Womb." Harris[2] doubts its limitation to the internal os uteri, and terms it "*tetanoid falciform constriction of the uterus*." Whatever its site, in the cases recorded difficulties of the most formidable kind arose from this cause. The pelves were normal and the presentations natural, yet out of seven labors four ended fatally, two before delivery. The constriction seems to have grasped the fœtus with such force as to have rendered extraction, either by the forceps or turning, impossible. I have no personal experience of this complication, which must fortunately be very rare. The introduction of the hand, the patient being deeply anæsthetized, would probably render diagnosis easy. The treatment must depend on the force and amount of constriction. If the constriction does not relax under chloroform, chloral, or the injection of atropine into the site of constriction, as recommended by Horton in rigidity of the cervix, turning would probably be our best resource. Should this fail, the Cæsarean section may be required to effect delivery, as happened in a case recorded by Dr. T. A. Foster, of Portland, Maine. Cœlio-elytrotomy is obviously unsuitable for such cases.

Bands and Cicatrices in the Vagina.—Extreme rigidity of the vagina, or bands and cicatrices in or across its walls, the result of congenital malformation, of injuries in former labors, or of antecedent disease, occasionally obstruct the second stage. There is seldom any really formidable difficulty from this cause, since the obstruction almost always yields to the pressure of the presenting part. If there be any considerable extent of cicatrices in the vagina, artificial assistance may be required. If we should be aware of their existence during pregnancy, and find them to be sufficiently dense and extensive to be likely to interfere with delivery, an endeavor may be made to dilate them gradually by hydrostatic bags or bougies. If they be not detected until labor is in progress, we must be guided in our procedure by the pressure to which they are subjected. It may then be necessary to divide them with a knife, and to hasten the passage of the head by the forceps, so as to prevent contusion as much as possible. It is obviously impossible to lay down any positive rules for such rare contingencies, the treatment suitable for which must necessarily vary much with the individual peculiarities of the case.

Extreme Rigidity of the Perineum.—Extreme rigidity of the perineum is often dependent upon cicatricial hardening from injury in previous labors. This may greatly interfere with its dilatation; and if laceration seems inevitable, we may be quite justified in attempting

[1] Boston Med. and Surg. Journ., 1878, March and May.
[2] Harris's note to second American edition.

to avert it by incision of the margins of the perineum, on the principle of a clean cut being always preferable to a jagged tear.

Labor complicated with Tumor.—Occasionally we meet with very formidable obstacles from tumors connected with the maternal structures. These are most commonly either fibroid or ovarian, although others may be met with, such as malignant growths from the pelvic bones, exostoses, etc.

Considering the frequency with which women suffer from fibroid tumors of the uterus, it is perhaps somewhat remarkable that these do not more often complicate delivery. Probably women so affected are not apt to conceive. Occasionally, however, cases of this kind cause much anxiety. Of course, those cases are most grave in which tumors are so situated as to encroach upon the cavity of the pelvis, and mechanically obstruct the passage of the child. Even those in which this does not occur are by no means free from danger, for interstitial and sub-peritoneal fibroids, situated in the upper parts of the uterus, and leaving the pelvic cavity quite unimplicated, may interfere with the action of the uterine fibres, prevent subsequent contraction, cause profuse post-partum hemorrhage, or even predispose to rupture of the uterine tissues. Hence, every case in which the existence of uterine fibroids has been ascertained must be anxiously watched. The risk of hemorrhage is perhaps the greatest; for, if the tumors be at all large, efficient contraction of the uterus after the birth of the child must be more or less interfered with. Fortunately it is not so common as might almost be expected. Out of five cases recorded in the *Obstetrical Transactions*, two of which were in my own practice, no hemorrhage occurred; nor does it seem to have happened in any of the twenty-six cases collected by Magdelaine in his thesis on the subject. I recently saw an interesting example of this in a patient whose case was looked forward to with much anxiety, in consequence of the existence of several enormous fibroid masses projecting from the fundus and anterior surface of the body of the uterus, and whose labor was, nevertheless, typically normal in every way. Should hemorrhage occur after delivery, the injection of styptic solutions would probably be peculiarly valuable, since the ordinary means of promoting contraction are likely to fail.

It is when the fibroid growths implicate the lower uterine zone and the cervical region that the greatest difficulties are likely to be met with. The practice then to be adopted must be regulated to a great extent by the nature of each individual case. If it be possible to push the tumor above the pelvic brim, out of the way of the presenting part, that, no doubt, is the best course to pursue, as not only clearing the passage in the most effectual way, but removing the tumor from the bruising to which it would otherwise be subjected when pressed between the head and the pelvic walls, which seems to be one of the greatest dangers of this complication. This manœuvre is sometimes possible in what seem to be the most unpromising circumstances. An interesting example is narrated by Sir Spencer Wells,[1] who, called to perform

[1] Obst. Trans., 1867, vol. ix. p. 73.

the Cæsarean section, succeeded, although not without much difficulty, in pushing the obstructing mass above the brim, the child subsequently passing with ease. I have myself elsewhere recorded two similar cases[1] in which I was enabled to deliver the patient by pushing up the obstructing tumor, in both of which the Cæsarean section would have been inevitable had the attempt at reposition failed. Therefore, before resorting to more serious operative procedures, a determined effort at pushing the tumor out of the way should be made, the patient being deeply chloroformed, and, if necessary, upward pressure being made by the closed fist passed into the vagina.[2]

Failing this, the possibility of enucleating the tumor, or if that be not possible, of removing it piecemeal with the écraseur, should be considered. On account of the loose attachments of these growths, and the facility with which they can be removed in this way in the non-pregnant state, the expedient seems certainly well worthy a trial, if their site and attachments render it at all feasible. Interesting examples of the successful performance of this operation are recorded by Danyau, Braxton Hicks, Lomer, and Mundé. Should it be found impracticable, the case must be managed in reference to the amount of obstruction; and the forceps, craniotomy, or even one of the varieties of abdominal section may be necessary. Out of forty-five old Cæsarean operations collected by Harris and Sänger, thirty-six proved fatal. Probably Porro's operation would give the patient a better chance, and of this several successful cases are recorded. (*Vide* p. 233.)

[The Cæsarean operation, with removal of the uterus, is preferable to the conservative method, and less apt to prove fatal; besides having the additional advantage of removing the diseased growth. In nine Porro-Cæsarean operations in fibroid cases in the United States, five ended in recovery; and five children were saved. The last four cases in order recovered, with two children saved.—Ed.]

The proportion of breech presentations in cases of fibro-myoma complicating delivery is much larger than usual; out of one hundred cases Lefour[3] observed thirty-two breech presentations, and Chabazain gives the proportion as 26 per cent. This is probably due to the altered shape of the uterine cavity caused by the tumor.

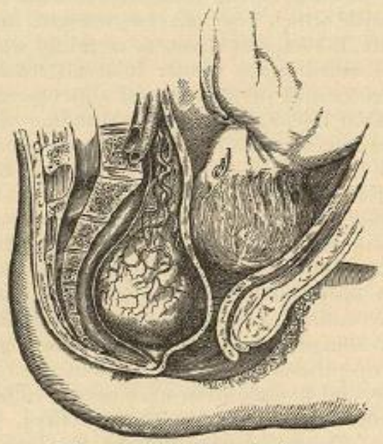
Tumors of the Ovaries.—The next most common class of obstructing tumors are those of the ovary (Fig. 129), and it is apparently not the largest of these which are most apt to descend into the pelvic cavity. When the tumor is of any considerable size, its bulk is such that it cannot be contained in the true pelvis, and it rises into the abdominal cavity with the uterus. Hence, the existence of the tumor that offers the most formidable obstacle to delivery is rarely suspected before labor sets in.

In order to estimate the results of the various methods of treatment, I have tabulated fifty-seven cases.[4] In thirteen, labor was terminated by the natural powers alone; but of these, six mothers, or nearly one-

[1] Ibid. for 1877, vol. xix. p. 101.
[2] This procedure is objected to in Dr. John Phillips's paper already quoted, but it seems to me on insufficient grounds
[3] E. Blanc: Annal. de Gyn., tom. xxxv. p. 197.
[4] Obst. Trans., 1867, vol. ix. p. 69.

half, died. In favorable contrast with these, we have the cases in which the size of the tumor was diminished by puncture. These are nine in number, in all of which the mother recovered; five out of the six children being saved. The reason of the great mortality in the former cases is apparently the bruising to which the tumor, even when small enough to allow the child to be squeezed past it, is necessarily subjected. This is extremely apt to set up a fatal form of diffuse inflammation, the risk of which was long ago pointed out by Ashwell,[1] who draws a comparison between cases in which such tumors have been subjected to contusion and cases of strangulated hernia; and the cause of death in both is doubtless very similar. This danger is

FIG. 129.



Labor complicated by ovarian tumor.

avoided when the tumor is punctured, so as to become flattened between the head and the pelvic walls. On this account I think it should be laid down as a rule that puncture should be performed in all cases of ovarian tumor engaged in front of the presenting part, even when it is of so small a size as not to preclude the possibility of delivery by the natural powers.

In five of the fifty-seven cases it was found possible to return the tumor above the pelvic brim, and in these also the termination was very favorable, all the mothers recovering. Should puncture not succeed, and it may fail on account of the gelatinous and semi-solid nature of the contents of the cyst, it may be possible to dispose of the tumor in this way, even when it seems to be firmly wedged down in front of the presenting part, and to be hopelessly fixed in its unfavorable position.

Failing either of these resources, it may be necessary to resort to craniotomy, provided the size of the tumor precludes the possibility of delivery by forceps.

[1] Guy's Hospital Reports, 1836, No. 2, p. 300.

The question of the effect on labor of ovarian tumor which does not obstruct the pelvic canal is one of some interest, but there are not a sufficient number of cases recorded to throw much light on it. I am disposed to think that labor generally goes on favorably. What delay there is depends on the inefficient action of the accessory muscles engaged in parturition, on account of the extreme distention of the abdomen.

There are a few other conditions connected with the maternal structures which may impede delivery, but which are of comparatively rare occurrence.

Vaginal Cystocele.—Amongst them is vaginal cystocele, consisting of a prolapse of the distended bladder in front of the presentation, where it forms a tense fluctuating pouch which has been mistaken for a hydrocephalic head, or for the bag of membranes. This complication is only likely to arise when the bladder has been allowed to become unduly distended from want of attention to the voiding of urine during labor. The diagnosis should not offer any difficulty, for the finger will be able to pass behind, but not in front of, the swelling, and reach the presenting part; while the pain and tenesmus will further put the practitioner on his guard. The treatment consists in emptying the bladder; but there may be some difficulty in passing the catheter, in consequence of the urethra being dragged out of its natural direction. A long elastic male catheter will almost always pass, if used with care and gentleness. Should it be found impossible to draw off the water —and this is said to have sometimes happened—the tense pouch might be punctured without danger by the fine needle of an aspirator trocar, and its contents withdrawn. When once the viscus is emptied, it can easily be pushed above the presenting part in the intervals between the pains.

Vesical Calculus.—In some few cases difficulties have arisen from the existence of a vesical calculus. Should this be pushed down in front of the head, it can readily be understood that the maternal structures would run the risk of being seriously bruised and injured. Should we make out the existence of a calculus—and, if the presence of one be suspected, the diagnosis could easily be made by means of a sound—an endeavor should be made to push it above the brim of the pelvis. If that be found to be impossible, no resource is left but its removal, either by crushing, or by rapid dilatation of the urethra, followed by extraction. Should we be aware of the existence of a calculus during pregnancy, its removal should certainly be undertaken before labor sets in.

Hernial protrusion in Douglas's space may sometimes give rise to anxiety, from the pressure and contusion to which it is necessarily subjected. An endeavor must be made to replace it, and to moderate the straining efforts of the patient; and it may even be advisable to apply the forceps so as to relieve the mass from pressure as soon as possible. It is, however, of great rarity. Fordyce Barker, in an interesting paper on the subject,[1] records several examples, and states

[1] Amer. Journ. of Obst., 1876, vol. ix. p. 177.

that he has met with no instance in which it has led to a fatal result, either to mother or child, although it cannot but be considered a serious complication.

Scybalous masses in the intestines may be so hard and impacted as to form an obstruction. The necessity of attending to the state of the rectum has already been pointed out. Should it be found impossible to empty the bowel by large enemata, the mass must be mechanically broken down and removed by the scoop.

[Our Southern readers are aware of the fact that their lowest class of women living in the country sometimes eat clay as a remedy for heartburn, and occasionally in excessive quantities, during the pregnant state. Impacted clay in the lower bowels has on two occasions proved such an obstacle to delivery that the Cæsarean operation was performed, one case occurring in Louisiana and the other in Georgia, in the years 1866 and 1882 respectively, after labors of sixty hours and three days. The first case recovered, the clay being removed by an attack of diarrhœa on the sixth day. The second died of convulsions in twenty days after the uterine and abdominal wounds had healed. Under chloroform about two and a half pounds of sand and marl were removed three days after the operation.—Ed.]

Œdema of the Vulva.—Excessive œdematous infiltration of the vulva may sometimes cause obstruction, and require diminution in size, which can easily be effected by numerous small punctures.

Hæmatic effusions into the cellular tissue of the vulva or vagina form a grave complication of labor. Such blood-swellings are most usually met with in one or both labia, or under the vaginal wall; in the gravest forms, the blood may extend into the tissues for a considerable distance, as in the case recorded by Cazeaux, where it reached upward as far as the umbilicus in front, and as far as the attachment of the diaphragm behind.

The conditions associated with pregnancy, the distention and engorgement to which the vessels are subjected, the interference with the return of the blood by the pressure of the head during labor, and the violent efforts of the patient, afford a ready explanation of the reason why a vessel may be predisposed to rupture and admit the extravasation of blood.

The accident is fortunately far from a common one, although a sufficient number of cases are recorded to make us familiar with its symptoms and risks. The dangers attending such effusions would seem to be great, if the statistics given by those who have written on the subject are to be trusted. Thus, out of one hundred and twenty-four cases collected by various French authors, forty-four proved fatal. Fordyce Barker points out that, since the nature and appropriate treatment of the accident have been more thoroughly understood, the mortality has been much lessened; for out of fifteen cases reported by Scanzoni only one died, and out of twenty-two cases he had himself seen, two died, and all these three deaths were from puerperal fever, and not the direct result of the accident.[1]

[1] The Puerperal Diseases, p. 60.

The blood may be effused into any part of the pelvic cellular tissue, or into the labia. The accident most often happens during labor when the head is low down in the pelvis, not unfrequently just as it is about to escape from the vulva. Hence the extravasation is more often met with low down in the vagina, and more frequently in one of the labia than in any other situation. I have met with a case in which I had every reason to believe that an extravasation of blood had occurred within the tissues immediately surrounding the cervix. It is natural to suppose that a varicose condition of the veins about the vulva would predispose to the accident, but in most of the recorded examples this is not stated to have been the case. Still, if varicose veins exist to any marked degree, some anxiety on this point cannot but be felt.

The thrombus occasionally, though rarely, forms before delivery. Most commonly it first forms toward the end of labor, or after the birth of the child. In the latter case it is probable that the laceration in the vessels occurred before the birth of the child, and that the pressure of the presenting part prevented the escape of any quantity of blood at the time of laceration.

The symptoms are not by any means characteristic. Pain of a tearing character, occasionally very intense, and extending to the back and down the thighs, is very generally associated with the formation of the thrombus. If a careful physical examination be made, the nature of the case can readily be detected. When the blood escapes into the labium, a firm, hard swelling is felt which has even been mistaken for the fœtal head. If the effusion implicate the internal parts only, the diagnosis may not at first be so evident. But even then a little care should prevent any mistake, for the swelling may be felt in the vagina, and may even form an obstacle to the passage of the child. Cazeaux mentions cases in which it was so extensive as to compress the rectum and urethra, and even to prevent the exit of the lochia. In some cases the distention of the tissues is so great that they lacerate, and then hemorrhage, sometimes so profuse as directly to imperil the life of the patient, may occur. The bursting of the skin may take place some time subsequent to the formation of the thrombus. Constitutional symptoms will be in proportion to the amount of blood lost, either by extravasation or externally, after the rupture of the superficial tissues. Occasionally they are considerable, and are the same as those of hemorrhage from any cause.

The terminations of thrombus are either spontaneous absorption, which may occur if the amount of blood extravasated be small; or the tumor may burst, and then there is external hemorrhage; or it may suppurate, the contained coagula being discharged from the cavity of the cyst; or, finally, sloughing of the superficial tissues has occurred.

The treatment must naturally vary with the size of the thrombus, and the time at which it forms. If it be met with during labor, unless it be extremely small, it will be very apt to form an obstruction to the passage of the child. Under such circumstances it is clearly advisable to terminate the labor as soon as possible, so as to remove the obstacle to the circulation in the vessels. For this purpose the

forceps should be applied as soon as the head can be easily reached. If the tumor itself obstruct the passage of the head, or if it be of any considerable size, it will be necessary to incise it freely at its most prominent point and turn out the coagula, controlling the hemorrhage at once by filling the cavity with cotton wadding saturated in a solution of perchloride of iron, while at the same time digital compression with the tips of the fingers is kept up. By this means pressure is applied directly to the bleeding-point, and the hemorrhage can be controlled without difficulty. This is all the more necessary if spontaneous rupture has taken place, for then the loss of blood is often profuse, and it is of the utmost importance to reach the site of the hemorrhage as nearly as possible.

If the thrombus be not so large as to obstruct delivery, or if it be not detected until after the birth of the child, the question arises whether the case should not be left alone, in the hope that absorption may occur, as in most cases of pelvic hæmatocele. This expectant treatment is advised by Cazeaux, and it seems to be the most rational plan we can adopt. True, it may take a longer time for the patient to convalesce completely than if the coagula were removed at once, and the hemorrhage restrained by pressure on the bleeding-point; but this disadvantage is more than counterbalanced by the absence of risk from hemorrhage, and of septicæmia from the suppuration that must necessarily follow. Softening and suppuration may in many cases occur in a few days, necessitating operation, but the vessels will then be probably occluded, and the risk of hemorrhage be much lessened. The late Dr. Fordyce Barker, however, held the opposite opinion, and thought that the proper plan was to open the thrombus early, controlling the hemorrhage in the manner already indicated, unless the thrombus is situated high in the vaginal canal.

Whenever the cavity of a thrombus has been opened, either by incision or by spontaneous softening at some time subsequent to its formation, it must not be forgotten that there is considerable risk of septic absorption. To avoid this, care must be taken to use antiseptic dressings freely, such as iodoform powder or wool, applied directly to the part, and frequent vaginal injections of diluted Condy's fluid. Barker laid special stress upon the importance of not removing prematurely the coagula formed by the styptic applications, for fear of secondary hemorrhage, but of allowing them to come away spontaneously.

[**Polypus.**—Large uterine polypi may act as serious obstacles to delivery. When sufficiently long in pedicle, a polypus may be extruded before the head of the fœtus. The tumor may also be detached in its expulsion, or may be removed by an écraseur if recognized in time; it may also be pushed up out of the way and secured by bringing down the child. I once replaced a large polypus that was extruded before the head, and the woman carried it two years longer; by which time, being much wasted by the discharge, she made up her mind to have it removed.—ED.]

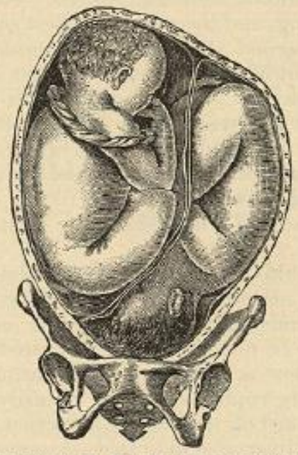
CHAPTER XI.

DIFFICULT LABOR DEPENDING ON SOME UNUSUAL CONDITION OF THE FŒTUS.

Plural Births.—The subject of multiple pregnancy in general having already been fully considered, we have now only to discuss its practical bearing as regards labor. Fortunately, the existence of twins rarely gives rise to any serious difficulty. In the large proportion of cases the presence of a second fœtus is not suspected until the birth of the first, when the nature of the case is at once apparent from the fact of the uterus remaining as large, or nearly as large, as it was before.

There may possibly be some delay in the birth of the first child, inasmuch as the extreme distention of the uterus may interfere with its thoroughly efficient action; while, in addition, the uterine pressure is not directly conveyed to the ovum as in single births, but indirectly through the amniotic sac of the second child (Fig. 130). Such delay is especially apt to arise when the first child presents by the breech, for, even if the body be expelled spontaneously, difficulty is likely to occur with the head, since the uterus does not contract upon

FIG. 130.



Twin pregnancy, breech and head presenting.