THE TREATMENT OF THE OBSTETRIC HEMORRHAGES.*

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For convenience in discussing the subject under consideration—the obstetric hemorrhages—let us classify all cases of bleeding associated with uterine pregnancy into four classes. In the first class of cases we shall include those in which hemorrhage takes place during the first few months of pregnancy, the so-called abortion cases. In the second class will be included those cases in which hemorrhage occurs from the premature separation of a placenta normally placed—the so-called "accidental hemorrhage" cases. The third class will include placenta previa, and the fourth post-partum hemorrhage.

Abortion may be threatened, inevitable or incomplete. The treatment of threatened abortion, with slight hemorrhage, is absolute rest in bed, in a room kept as quiet as possible and free from visitors, repeated doses of viburnum prunifolium in mild cases, morphine for cases where pain is present; light diet, and the bowels to be emptied by enemata. If hemorrhage is profuse, the vagina should be tightly tamponed with iodoform gauze and treatment administered as above. Inevitable abortion may be treated by the conservative, non-operative method, or by the radical operation of curettage.

There are many advocates of both procedures, and each practitioner must choose for himself which plan he will follow in these cases. By the conservative method the treatment will be largely expectant, the patient being allowed to complete the natural process of emptying the uterus, the medical attendant holding himself in readiness to interfere should the indication arise for so doing. Should the physician be unable to remain with his patient, or should hemorrhage be profuse, a tight vaginal tampon should

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be applied, for not only will the patient be left in safe condition, but in the case of hemorrhage, dilation will proceed more rapidly. The operative treatment for inevitable abortion is favored by many, for the reason that it is considered to be safer for the patient to have all the products of conception removed at one time, by the finger or curette. By active operative procedure it is claimed that not only is there no danger, but there is better involution, a shorter convalescence, and no danger of sepsis from the retention of secundines. In my opinion, the conservative plan of treatment is safer for general use than curettage. There are thousands of patients treated each year successfully without resort to curettage, and if complications follow, they are explained in many instances by the fact that the patient has been treated carelessly, and the condition made light of. With careful observation, such as all of these cases should receive, I am convinced that complete recovery should follow every case of spontaneous abortion. If subinvolution follows, appropriate treatment should be given for it, and if there are evidences of the retention of secundines, curettage should be performed. While we concede the fact that the operation of curettage is, as a rule, simple, and, when properly done, attended by little danger, we must admit that the operation, in the hands of inexperienced operators, has been proven over and over again to be dangerous, such accidents as rupture of the cervix by instrumental dilation and puncture of the uterus by the curette, being not at all uncommon. In fact, we have the testimony of many of our best men that such accidents happen not infrequently in the hands of careful operators.

Incomplete abortion can be treated properly in only one way, namely, by removal of the retained secundines by means either of the finger or curette.

ACCIDENTAL HEMORRHAGE AND PLACENTA PREVIA.

The differential diagnosis between these conditions is at times exceedingly difficult. Within the past two months I have seen two patients, in one of whom the diagnosis of accidental hemorrhage had been made, because the margin of placenta could not be felt, and also because of the severe pain from which the patient suffered. One month after the examination was made the condition was positively diagnosed as placenta previa, the margin of placenta being felt high up, and when the placenta had been expelled, the small opening in the membranes was found to be located just at

its edge. In the second patient, the diagnosis of placenta previa had been most positively made by several physicians, but the case proved to be one of severe accidental hemorrhage. Diagnosis can be positive only when the edge of the placenta can be felt. It is probable that we have to deal with a lateral placenta previa in many cases of supposed accidental hemorrhage, and vice versa, for the clinical picture may be practically the same in both conditions.

ACCIDENTAL HEMORRHAGE may be of three varieties: (1) external, (2) concealed, and (3) the combined form; and the bleeding in any case may be mild or severe. The treatment of the mild cases, occurring during pregnancy, is practically the same as that already spoken of as appropriate for threatened abortion. If the patient is in labor, and hemorrhage slight, no treatment is necessary; but if in any case bleeding is more profuse, labor should be hastened by the introduction of a modified Champetier de Ribes bag. This will act more surely than rupture of the membranes, and the preservation of the membranes intact is safer for both mother and child. Where hemorrhage is severe, the uterus should be emptied as speedily as possible, consistent with the welfare of the child and the soft parts of the mother. In this condition hemorrhage will continue until the uterus has been emptied; hence the necessity for accurate diagnosis and prompt action. The best method in these cases of severe hemorrhage, external or concealed, is manual dilation of the cervix, or if the cervix be unyielding, the use of incisions, delivery being accomplished by forceps, version or craniotomy, if the child is dead.

On October 30 last I was called to see a patient who gave the following history. The woman was nearly at term in her third pregnancy, the two previous labors having been normal. At ten o'clock on the preceding night she had passed several large blood clots, but had no labor pains. A physician was called and a diagnosis of placenta previa was made. After some difficulty a modified Champetier de Ribes bag was introduced. During the night another physician saw the patient and corroborated the diagnosis of placenta previa. Labor did not begin after the introduction of the bag, and as the patient lost considerable blood during the night, it was my good fortune to see the patient at ten o'clock in the morning. At this time—twelve hours after the initial hemorrhage—the patient was in critical condition, having a pulse of 160, and she seemeed to be exsanguinated. The uterus was of about the right size for full term gestation, but the walls were

tense and hard, as if blood had collected in the cavity of the uterus. The patient also complained of pain in the right side of the uterus, and the fetal heart could not be heard, although it had been distinct the night before. The diagnosis was made of partially concealed accidental hemorrhage, and ether was administered preparatory to operation. The cervix was found to be dilated to the size of a half dollar, and what felt at first to be the edge of the placenta proved to be the rim of muscular tissue at the internal os. The bag in this case had slipped up above the head, which presented in L.O.A. position, and was, therefore, perfectly useless. The cervix was then carefully dilated with the hand, and during the dilation a considerable quantity of dark blood escaped from the interior of the uterus, where it had collected during the twelve hours preceding. After dilation the forceps was applied and several tractions made, but it was apparent that delivery by this method would be slow, and in order to make certain of the death of the fetus, the hand was passed up into the uterus and the cord found to be pulseless. Craniotomy was at once decided upon as being the quickest and easiest way in which to effect delivery, and the operation was easily completed and the child extracted in about five minutes. The uterus was filled with sterile gauze, and a laceration of the anterior lip, in which a bleeding artery was seen, was quickly sutured. The placenta was expressed easily by the Credé method, and was found to be normal, except for an area 9x5 c.m. at the periphery of the maternal surface, where there was a distinct depression, partially filled with dark red clots. Just after the birth of the head a number of dark clots, which had evidently filled this depression, escaped from the vulva. The patient, after the operation, was almost pulseless, for she had lost a large amount of blood, but she made an uneventful recovery. In cases similar to this, where the child is dead and there is need of haste, craniotomy is frequently the safest and best operation. Desperate efforts to extract a dead child by forceps or version have resulted in rupture of the uterus and the death of the patient times without number, and I am convinced that many lives could be spared each year if craniotomy were more generally performed.

PLACENTA PREVIA is of three varieties—marginal, lateral and central. Whenever a positive diagnosis of placenta previa is made, the uterus should be emptied as soon as it is possible to do so, the method or procedure depending on the degree of dilation of the cervix, the amount of hemorrhage, etc. If, however, the patient elects to take the risk of further bleeding, and is willing

to place herself in a position of comparative safety in a hospital, where the services of a skilled physician may be obtained at any time, interference with pregnancy may be delayed. Delay under all circumstances is dangerous, but if the patient is so desirous of the life of her child that she is willing to expose herself to what may be great danger, in order that the fetus may round out, so to speak, its full term of intrauterine life, or at least that a period of viability may be reached, under proper medical surroundings, she should be allowed to proceed in her pregnancy. The conditions under which the complication is met with are so varied that no single method of treatment is applicable to all cases. It will be well, I think, to enumerate the different plans of treatment, and then discuss each procedure separately. Tamponade of the cervix and vagina, rupture of the membranes, application of forceps, forcible dilation of the cervix followed by forceps or version, Cesarian section, use of the modified champetier de Ribes bag, and podalic version by the combined or internal method, are all measures which are valuable in the presence of conditions calling for their use.

TAMPONADE OF THE CERVIX AND VAGINA should be used where the cervix is rigid and but little dilated. Under these circumstances the application of a firm tampon is of the greatest value, not only in checking hemorrhage, but also in softening and dilating the unyielding cervix. The tampon may also be used to advantage in an emergency, when one is unprepared for a more formidable plan of operative procedure, thus allowing time for complete preparation.

RUPTURE OF THE MEMBRANES may be used when hemorrhage is slight and where the cervix is so well dilated it is thought probable that bleeding will cease from the pressure of the presenting part, engaging in the cervix. If, after the membranes have been ruptured, hemorrhage continues, dilation should be completed manually, forceps applied, or version performed.

THE USE OF FORCEPS is of value in those cases in which the vertex presents, and where hemorrhage occurs for the first time, or at least becomes severe, in the latter part of the first, or in the second stage of labor.

FORCIBLE MANUAL DILATION OF THE CERVIX, or accouchement forcé, should, in our opinion, be limited to those cases where combined version has been attempted unsuccessfully, and where it is necessary to dilate the cervix sufficiently to pass the hand into the uterus for the performance of podalic version. In placenta

previa, the lower uterine segment is so vascular, so soft, and so easily torn, that forcible dilation may easily result in serious laceration of the cervix, which, during the subsequent extraction of the child by forceps or version, may extend up into the lower uterine segment, constituting rupture of the uterus, an accident which I have seen occur in two cases of placenta previa.

CESAREAN SECTION has been advocated by Dudley of New York, and there can be no question of the great value of the operation in selected cases. An elderly primipara, for example, is found at the eighth month to have placenta previa. The soft parts, because of rigidity, are not adapted to the necessary dilation, either spontaneous or artificial, the patient is pregnant late in life, and may never conceive again. Under these circumstances, who can doubt that Cesarean section, skilfully performed, would give better results for both mother and child than any other plan of treatment? For many reasons the operation will rarely be done, but with proper conditions, the procedure will be safe and successful in its results.

THE USE OF THE MODIFIED CHAMPETIER DE RIBES BAG has been suggested, both to control the hemorrhage by its pressure, and for cervical dilation as well. Theoretically, at least, the idea is an excellent one, and we have no doubt that, in skilled hands, the use of the bag will be attended by good results. The conical bag is well suited for the purpose of pressure against the lower segment of the uterus, and by traction upon the tube connected with the bag, pressure can be kept up, thus controlling the bleeding. By this method, dilation is slowly and safely accomplished, and when at last the cervix is well dilated, forceps or version can be easily done, the membranes having been kept intact up to the last moment. Careful observation must be made of the amount of bleeding, and also to detect possible leakage from the bag, and one should be prepared to take more active measures should hemorrhage continue, or be at any time profuse. We believe that the method should be given a thorough trial, for it would seem to be an excellent procedure in many cases.

PODALIC VERSION is by far the best known, and, generally speaking, the safest and best plan of treatment of placenta previa. The operation may be performed by the combined, or Braxton Hicks method, or by the more commonly used internal method. The *combined method*, in which two fingers only are passed up to the cervix, is of value in those cases of placenta previa where membranes are still intact, or where there still remains a con-

siderable quantity of amniotic fluid, and the operation can be performed where the cervix is dilated sufficiently to admit two fingers. The history of a recent case will illustrate the value of the procedure. In the latter part of October I was called to see a patient who was bleeding rather freely at about the seventh month. The membranes had ruptured some hours before, but there was still a fair amount of fluid present. While preparations were being made for examination, the woman began to bleed profusely, and as quickly as possible the first two fingers of the right hand were passed up into the cervix, which was found to be dilated to the size of a half dollar, and a lateral placenta previa found. The vertex was quickly pushed to one side, while with the other hand the breech was pressed downward over the pelvic brim. A foot was then seized and drawn through the cervix, out to the vulva orifice, the entire procedure consuming not more than five minutes. Bleeding now ceased entirely, and the patient was allowed to come out of the anesthetic. Labor pains began at once, and within four hours the patient gave birth very easily to a living child weighing about three pounds. There was no bleeding after the foot was brought down, the pressure of the breech against the placenta and lower segment preventing further hemorrhage. The placenta was adherent to the uterine wall, requiring manual extraction, and on account of hemorrhage it was necessary to pack the uterus tightly with sterile gauze. The patient made an uneventful recovery, but the child unfortunately lived but a few days.

Internal Podalic Version is the most frequently used plan of treatment, and is advised under the following conditions: first, where combined version fails; second, in central placenta previa, where it is necessary to pass the hand up through the placental mass in order to seize a foot, and third, in any case of severe bleeding where the cervix is sufficiently dilated to admit the operator's hand. The breech forms, as a rule, a most efficient plug in the lower uterine segment, and bleeding will usually cease after version has been performed. At this point let me utter a few words of warning with reference to rapid extraction following version. I have seen at least two lives sacrificed by rapid extraction in cases of placenta previa, the cause of death in both patients being rupture of the uterus. We have already spoken of the vascularity and soft condition of the lower uterine segment, and we believe, therefore, that the safest plan of treatment after version is to allow the patient to complete the delivery, if possible,

unassisted, interfering only in the presence of a good indication. Rapid extraction in these cases may save the lives of a few children, but it is certain to be attended by a large maternal mortality. In concluding the subject of placenta previa, I would advise forceps or version in those cases where the cervix is well dilated, the choice of operation depending upon the individual skill and personal choice of the operator. Where the cervix is but moderately dilated, the choice will be between the use of the modified Champetier de Ribes bag and combined podalic version, while in the presence of a rigid, poorly dilated cervix, the use of a firm gauze tampon is advised.

POST-PARTUM HEMORRHAGE may occur in the third stage of labor, or after the expulsion of the placenta, and the source of the bleeding may be the uterine sinuses, cervix, vagina, or perineum. It is my opinion that patients frequently lose, unnecessarily, too much blood in the third stage of labor. After the expulsion of the child, the uterus relaxes in some instances sufficiently to allow of free hemorrhage within its cavity, comparatively little blood making its escape externally, and no danger signal in that way given. We have all seen cases where a large amount of blood has collected within the membranes, and again in some instances a considerable amount of blood is expressed before the placenta can be expelled. The fault lies very often in the failure to properly observe the height of the fundus, and the size of the uterus, both immediately after the birth of the child, and during the placental stage, so called. During the third stage the fundus should be kept *at or below* the navel, for should it rise above that point it is probable that blood is accumulating within the uterine cavity. If massage and compression of the uterus fail in controlling bleeding, whether external or internal, the placenta should be removed at once by the Credé method, if possible, or if this method does not succeed, and bleeding continues, the placenta should be extracted manually. After the uterus has been emptied, the source of hemorrhage should be determined. Bleeding from laceration of the vagina and perineum is rarely profuse enough to cause alarm, but the appropriate treatment is the immediate application of sutures through the torn parts. It is very important to differentiate bleeding from the cervix and that from the uterine sinuses, for the treatment of the two conditions is radically different. As a rule, where the cervical artery is torn, the uterus is well contracted, and blood will escape in a small, bright stream. In hemorrhage from the uterine sinuses the

uterus is usually soft and the bleeding is more profuse. In the large majority of cases bleeding from the cervix will cease if no douche is given, a vulva pad applied, and the uterus is allowed to take care of itself, the finger being kept on the fundus simply to note its height and degree of contraction. The limbs of the patient are brought together in extended position, and no massage of the uterus allowed. I have used this method of non-interference, so to speak, in many cases during the past ten years, with excellent results. Within the past few weeks a patient completed the latter part of the first stage very rapidly, a cervical tear resulting, bright blood coming away in front of the advancing head. During the third stage, although the uterus was well contracted, bleeding continued from the cervix, and the placenta was expressed early on that account. After the placenta came away, under the plan of treatment just outlined, hemorrhage entirely ceased. In rare instances it may be necessary to suture the torn cervix, an operation—with good light and competent assistance—not difficult, as a rule, to perform. If unable to suture the cervix, a firm tampon of gauze will usually check the bleeding. For the purpose of controlling hemorrhage from the uterine sinuses I have found the following routine treatment to be efficacious: first, massage of the uterus; second, a vaginal douche of weak lysol, or normal salt solution at a temperature of 116° F. Should hemorrhage continue, a uterine douche of the same solution at the same temperature should be given. While this is being given the nurse prepares a solution of acetic acid, 2 per cent., and if bleeding continues, two to three quarts of this solution are given in a uterine douche. Hot 2 per cent. acetic acid solution, given at a temperature of 116° F., will usually check all bleeding from the uterine sinuses, but if hemorrhage still continues, it is my rule to pack the uterus at once with sterile gauze. I have never seen this plan fail in controlling hemorrhage. Ergot should be given by mouth, or, if bleeding is profuse, by hypodermic, immediately after the removal of the placenta. In an emergency, the plan of treatment would be necessarily different, because of the lack of hot solutions for injections. In cases of this kind the uterus should be vigorously massaged, the placenta removed, the uterus compressed as tightly as possible against the symphysis pubis, and, if necessary, the hand should be carried up into the uterus, with a piece of ice, if possible, and, after removal of all clots, firm bimanual compression should be made. Then, if necessary, strips of bedding or clothing could

be carried up into the uterus and used as a tampon. Pressure on the abdominal aorta may be also used. Hemorrhage in any case having been controlled, the patient should at once be given large quantities of hot saline solution, with stimulants, preferably in most cases by rectum, but, if necessary, intravenous infusion should be resorted to, and, in some instances, hypodermoclysis will prove to be beneficial. The great value of saline enemata, with whisky, or whisky and strychnine, can hardly be overestimated, and whenever the patient loses more than a pint of blood, they may be used to advantage. The application of heat, raising the foot of the bed, bandaging of the extremities, and the routine treatment of acute anemia should, of course, be carried out. Secondary hemorrhage, after a good primary contraction of the uterus, is of comparatively rare occurrence, but should the complication arise, it should be treated on the lines already spoken of in primary hemorrhage. In some cases, at least, the uterus is not made to contract properly immediately after the birth of the placenta, and again it will be found that in some cases hemorrhage is due to the retention of portions of placenta, or blood clots, the treatment of which is, of course, removal of the foreign body.

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