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PLACENTA PRÆVIA.

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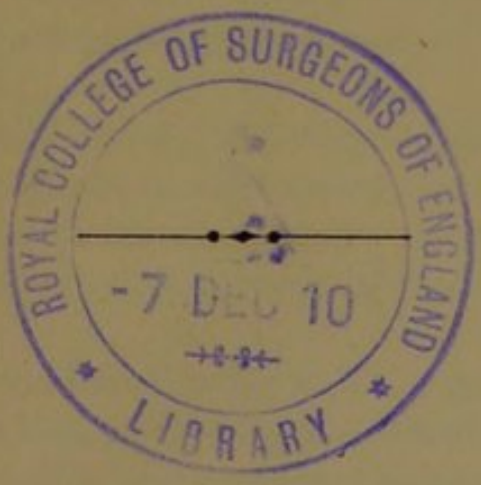

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PLACENTA PRÆVIA.

An accident of so serious a nature as placenta prævia, or the implantation, in whole or in part, of the placenta over the mouth of the womb although occuring but seldom, must have attracted the attention of accoucheurs from the earliest periods when midwifery began to be practiced as an art, and its phenomena investigated with the least approach to scientific interest. Accordingly we find this condition noticed by writers of the middle of the 17th century, as Guillemeau, Mauriceau, Astruc, Pugh and others; but these writers supposed that, when the placenta was found in this position, it had been separated from its normal site, and had fallen to the lower segment of the uterus. Portal, who wrote in 1743, clearly describes this condition in nine cases. He was aware and taught that the placenta was originally attached to this site, and had not fallen there. Leveret and Smellie, in 1752, gave minute descriptions of cases, with their correct pathology. But the great English accoucheur, Rigby, first, in 1775, gave a full and clear view of this condition, with distinct rules of practice. He it was who gave the term, "unavoidable hæmorrhage," to placenta prævia, a term that has been used by most writers as synonymous with placenta prævia, and enforced rules of practice even to our day.

The *cause* of this anomalous implantation of the placenta, though the source of much controversy and prolific of theories, can scarcely be said to be obscure or doubtful, and is given in the well-known fact that it almost always occurs in the multiparæ.

At the time of ovulation, which is the menstrual act, the mucous membrane, which is the uterus, stimulated by the changes going on in the ovaries, becomes succulent, swollen, corrugated, closing the uterine cavity. After conception, this condition is greatly extended and intensified by the stimulus of the impregnated ovum—so much so, that, upon its arrival at the uterine

extremity of the Fallopian tube, it finds it obstructed by the swollen condition of the uterine mucous membrane; its further advance is arrested at this point, and its implantation at or near the fundus secured in all ordinary pregnancies. After frequent child-bearing, the uterus loses its symmetry, and perfect co-ordination remains larger—often more inactive its cavity less perfectly filled by the corrugated mucous membrane, and the impregnated ovum, upon its arrival at the cavity of the uterus, falls to the lower segment, where it becomes fixed, just as it would have done in its normal site, or had it dropped into the cavity of the abdomen, as in extra-uterine pregnancy.

In very rare cases of primipara, this condition may exist for want of correspondence of uterine with ovarian activity, or from some anomalous size or shape of the cavity.

The ovum falling to, and becoming fixed upon the lower segment of the uterus, necessarily developes placenta at this site, which, rapidly developing in every direction, spreads over the internal os and the entire lower segment, forming placenta centralis; or, the ovum may be caught in a corrugation or fold of uterine mucous membrane some distance above the os, in which case only its lower margin may reach to, or over the os, giving placenta lateralis, or partial placenta prævia.

The causes, then, of placenta prævia are not obscure or doubtful, for which fact we are not indebted to the many theories upon the subject, but to our advanced knowledge of the changes in the uterine mucous membrane, during, and associated with and caused by ovulation.

Symptoms: The synonym of "unavoidable hæmorrhage," first suggested by Rigby, and so long retained in connection with placenta prævia—though almost necessarily connected with this anomalous condition—the fore-coming of the after-birth is at fault, in that in very rare cases there may be no hæmorrhage, not even during labor. This may be caused by fatty degeneration of the placenta, having advanced so far as to cut off the blood supply and obliterate the uterine sinuses previous to the actual separation of the placenta at the os. Unfortunately this is very rarely the case—alarming, and heretofore unavoidable and unmanageable—hæmorrhage being the rule. Most generally the first indication of placenta prævia is a gush of blood, without warning—and this without regard to the position, or mental state, or the duties the patient may be

engaged in. Frequently this discharge corresponds with what would have been the menstrual period, had the woman not been pregnant, and is immediately dependent upon the periodical hyperæmia, continued, perhaps, in most women during pregnancy.

The first discharge—if the woman is not advanced more than five or six months, previous to which hæmorrhage is rare—may be, and often is, moderate in quantity, ceases spontaneously, almost, by the time the woman's attention is called to it; or, if she is erect and engaged in her household duties, it ceases upon her assuming the supine position, and is readily controlled by simple remedies. But this is a respite, only, as the hæmorrhage is almost certain to return with increased violence within a few days; at farthest, at the next menstrual period. Most generally it is not until near the close of gestation, or at the commencement of labor, that the hæmorrhage first makes it appearance—often at this time with a frightful discharge of blood, that may, in a few moments, place the patient in imminent peril, or even destroy her, without prompt and scientific treatment. As a rule, the nearer the woman is to her full time, the greater the hæmorrhage, which is greatest at the commencement of labor.

If there be uterine contraction; if labor be present, the hæmorrhage is increased during each pain by the separation of an additional portion of placenta by each uterine contraction. For this reason, the hæmorrhage received the name of "unavoidable," as uterine contractions were a necessity, and yet the immediate cause of additional separation of placenta and increased discharge. In noting carefully the hæmorrhage in these cases, I am satisfied that Legroux, Playfair and Barnes are incorrect in supposing the hæmorrhage is not greater, but really less, during a labor pain, the discharge, they think, being greater because the accumulated blood is discharged at this time. It is true we have clots discharged at the beginning of each pain, the accumulation during the interval, but most of the blood discharged during the pain is bright florid blood, that has just escaped, and is then escaping from the uterine sinuses. The causes for this are obvious; for, while uterine contractions, by condensing uterine tissue, do lessen the hæmorrhage in this and every form of uterine hæmorrhage, yet each pain or contraction, at its inception, separates an additional portion of placenta, laying bare additional uterine sinuses that must be closed, not alone by uterine contraction, but by these lessening the supply

of blood, slacking the current of circulation, giving time for coagulation, for thromboses to form, as it is not only by constricting the mouths of uterine sinuses that the hæmorrhage is checked, and the woman prevented from bleeding to death, even in natural labor, but also by the formation of thrombi, caused or promoted by uterine contraction, angulating the tortuous arteries of the uterus. During the time intervening between the separation of additional placenta and the formation of thrombi, there is increased uterine hæmorrhage, so that this increased hæmorrhage during a pain is actual, and not apparent only, as supposed by Legroux, Barnes and Playfair.

Called to a case of hæmorrhage during the latter months of pregnancy, a vaginal examination is absolutely necessary, and no feeling of delicacy upon the part of patient or accoucheur, nor fear of increasing the discharge by removing or breaking up clots, would justify us in neglecting it. Upon a vaginal examination, the diagnosis is seldom difficult or doubtful. If the os be sufficiently dilated to admit the finger, we will feel the placenta, either centrally or its margin inserted over the os, instead of the smooth membranes. If the finger cannot be inserted, the soft, boggy feel of the lower segment of the uterus, with the absence of the presenting part of the child, will readily determine the nature of the case.

Source of Hæmorrhage: From what has been already said, when considering the symptoms, this has been indicated, and it has always appeared to us one of the strangest things in obstetrical writing that there should be any doubt or difference of opinion upon this subject. It was pointed out by the early writers, and yet so slow do we learn, and with such tenacity do we cling to error, especially if associated with a great name; and so loose are the expressions of obstetrical authors, that we are even yet groping at noonday for what we could scarcely fail to see at midnight. In one of the latest, as also one of the best, works on midwifery (Playfair), it is stated that "it is pretty generally admitted by authorities that the immediate source of the hæmorrhage is the lacerated utero-placental vessels.

Now this is scarcely a fair statement of the case by this candid, worthy and usually correct author, as he is aware that the very existence of these utero-placental blood-vessels,—other than a few small vessels intended only for the nutrient wants of an advectitious organ, the placenta,—has been denied by many of the most distinguished men in the profession,

such as Drs. Knox, Madge, Monro, Meigs, Velpeau, Robin, Hodge, and others, while very few have thought they were able to verify the anatomical views of Wm. Hunter, whose injections of placenta through uterine arteries were thought to prove the existence of these vessels. Dr. Dalton's mythical diagram of these vessels would demonstrate the existence and importance of these vessels did they really exist otherwise than in the imagination of the author. Dr. Dalton is an ingenious and honest investigator, but in this, we think it not improbable, he has deceived himself. If this condition, figured in his diagram, really existed, why did he not, as suggested by Dr. Read, "make assurance doubly sure by forcing a more substantial and palpable substance than air along these vessels?"

The utterly untenable views of Prof. J. Y. Simpson that the blood in these cases came from the separated portion of the placenta—though never accepted by the profession—might again be revived with better chance of success if Dr. Dalton's placental anatomy could be established; as nothing is easier than to see how a woman might bleed to death from a partial separation of one of these placental sinuses, fed by one of his arteries. But is this the case? We have hæmorrhages from the placenta, but, as is well known, it is then the child that perishes; whereas in the hæmorrhages of placenta prævia, it is the mother that bleeds to death. The blood in the placenta, as is well known, belongs to the child, was manufactured by the child, never was, and never becomes, a part of the mother's blood.

It would then have been more consonant with the present state of medical views, had Dr. Playfair said, the source of hæmorrhage in this and all other uterine hæmorrhages caused by separation of the placenta was from the uterine sinuses, as all authors, differing as they may about the formation and connection of these sinuses, are agreed that the blood is poured out from them.

These sinuses are uterine veins enormously enlarged at placental site, and formed obliquely between, out of the muscular walls and mucous tissue of the uterus, laid bare by the separation of the placenta, opened up, uncovered by the removal of the epichorian, the *decidua vera*, that portion of the mucous membrane of the uterus which forms the maternal portion of the placenta, (Mathew Duncan to the contrary, notwithstanding), and against which, into which, chorion villi grow and gain their relation with maternal structure, in this and every

other uterine attachment of the ovum. Dr. Simpson's views as to the source of hæmorrhage in these cases, incorrect as they were, had at least this plausible excuse, that after the complete separation of the placenta the hæmorrhage generally ceased, and this, whether the separation was produced by nature or art. With this observation a rule of practice was self-suggested to artificially separate the entire placenta.

Dr. Barnes has promulgated another theory as to the source and cause of hæmorrhage in these cases, equally at fault with Simpson's, but entirely wanting in the plausibility of Simpson's, not suggestive of any rule of practice and unsupported by a single fact, and yet, by mere dint of reasserting it, has forced it into credit with some who ought to know better.

Now, Dr. Barnes, though an honest, earnest and ardent worker, and a gentleman of much learning and ability, is never so much like himself as when astride a hobby, and is seldom found wanting one, and here, in despite of all known facts to the contrary, after relating (truly) that the hæmorrhage is caused by want of correspondence in development between uterine tissues and placenta, reverses the natural order of things by supposing the development of placenta is in excess of placental site of uterus, whereby the placental rootlets, cotyledons, in their reachings, longings, for the beyond, drag other cotyledons after them, thus detaching placenta from uterine tissue.

Now, this fanciful theory enforced with so much rhetoric but unsupported by a single fact, is abundantly refuted in the fact that placental growth is most active, is nearly or quite completed, during the first six months, before which time hæmorrhage is rarely present, and when so is most generally comparitively unimportant; while during the last three months of gestation, at which time the placenta has attained its almost full size, and is certainly no longer engaged in the unprofitable task of longing for the beyond, and sending out additional cotyledons, that hæmorrhages are most common, most violent and dangerous, which places this theory in the position of being most potent in results, when the producing causes are least so.

Jacquemier, who is indorsed by Cazeau, gave the true theory of bleeding in *placenta prævia*; in referring it to the well known fact that during the first six months, the superior portion, or corpus uteri, is alone developed, while during the last three months, the development of the uterus is at the expense of the lower segment and neck, that during the time the uterine

development concerns its corpus, the placenta obtains almost its entire growth, while during the last three months, when the lower segment and neck are undergoing most rapid changes, the placental growth is least, necessitating separation and hæmorrhage.

We have seen many objections to these views of Jacquemier and Cazeau by authors who have theories of their own to promulgate, but none that we consider valid. Playfair objects to it, "that there is no evidence to show that the lower segment of the uterus does expand more in proportion than the upper, during the latter months of pregnancy." We believe there is positive demonstration of the fact, confirmed by almost all authorities. During the first six months, the growth, expansion of the uterus being of the body and fundus, the cervical portion remaining intact, the uterus reaching to the umbilicus is a spheroid, while in the last three months the lower segment and cervix undergo rapid and most important changes, whereby the entire organ becomes ovoid. These changes are produced by the circular fibres of the cervix being unraveled, drawn into the vortex of uterine development, so that in the last two weeks of gestation, or at the beginning of labor, the cervix is entirely obliterated, and this corresponds, as is well known, with the time at which the hæmorrhage is most common, most violent. The area over which the placenta is attached being greatly extended, while the placenta, having attained almost its full growth, loses its correspondence with uterine site, and as it cannot be stretched, a separation of its maternal portion, *decidua vera*, from uterine tissue is necessitated, thereby laying bare uterine sinuses, and rendering hæmorrhage, in most cases, unavoidable. This increased development of the lower segment of the uterus during the latter periods of pregnancy, which Playfair thinks, without proof, is admitted, even by Barnes, who, mounted upon "my theory," rides a Gilpin race, in which, like that illustrious hero, he gets farther than he intended, yet alights with the lower segment of the uterus rapidly enlarging.

It is true the older authors, and some later, who should have known better, as Tyler Smith, mistook the manner of the changes in the lower segment of the uterus, supposing it was by an opening or stretching of the internal os, whereby a gradually enlarging cone was produced by the enlarging internal os, until the neck was entirely obliterated,

It is this view that Barnes is endeavoring to refute, and does so, with none the less zeal that no one believed it. Cazeau had long since refuted it, and pushed his views too far, when he supposes the size and shape of the cervix undergoes little or no change until the last two weeks of gestation, and that the supposed shortening is only an illusion, and Mathews Duncan, who sounds the key-note in this, would draw entirely too much upon our credulity, when he would have us believe that the cervix retains its original length until labor sets in. And while it does not concern the views we have been maintaining, the enlargement of the lower segment of the uterus during the latter months of pregnancy, with which the cervix proper need have nothing to do, we are satisfied that the shortening of the cervix is not apparent only, an illusion produced by its softening in pregnancy, but is real, absolute.

This rapid development of the lower segment of the uterus in the latter months of pregnancy, by which a separation of placenta, in placenta prævia, is produced, causing hæmorrhage, finds additional proof in the fact that mal-presentations, so frequent in premature labors, are reduced to a minimum at term, as a fœtus that finds equal adaptation, accommodation, in any position in a spheroid, is forced to present such diameters as are best adapted to the form of an ovoid. This eternal fitness of things, rapid growth of upper portion of uterus with corresponding rapid growth of placenta, during the first six months, with rapid increase of lower segment of uterus, with stationary condition of placenta during the last months of gestation, in normal location of placenta, secures the well-being of mother and child, and is comparatively unimportant in placenta prævia during the first, but fearfully dangerous in the last period of gestation.

Prognosis: This, under the treatment heretofore pursued, has been, as we might readily suppose, in so grave a malady, truly frightful—but not so fatal as given in the tables of Churchill or Simpson. In 1,005 cases collected by Dr. Read, more than 200 mothers perished, or, one in four and one-half of the mothers, and about half of the children were lost.

In Dr. Barnes' practice, the mortality was greatly less, only one mother in eleven having perished, and as three of these were from causes equally potent in other labors, and not necessarily connected with the placenta prævia, the deaths from this cause were only one in twenty-three cases. But it may be hoped that we

have now attained a position in the treatment of these cases, where it is safe to predict that even this improved table of Dr. Barnes is fearful compared with the future; if indeed, the time has not arrived when it is scarcely excusable to let a woman lie merely because she has placenta prævia.

Treatment: Observing, truly, that after the appearance of hæmorrhage in placenta prævia there was danger of its continuing or returning as long as the woman was pregnant; that no reliance could be placed in precautionary or conservative treatment, as it was only after the uterus was emptied of its contents that the hæmorrhage ceased without fear of its returning, the older authors established an iron rule, which is given by Denman, who says: "It is a practice established by high and multiplied authority, and sanctioned by success, to deliver women by art in all cases of dangerous hæmorrhage, without confiding in the resources of the constitution." Subsequent ages have but confirmed the practice stated by Denman, and the improvements have been, not to evade it, but in the manner of its performance, as the only safety to the woman, as it was then, is now, to empty the uterus.

In all cases, then, of hæmorrhage, when the cause is ascertained to be placenta prævia, whether in the sixth or ninth month, or at term, the uterus must be emptied, as no reliance can be placed in position on a hard mattress, cold, acidulated drinks, opium, sugar of lead, cold applied to the vulna, plugging the vagina, etc., farther than they may be used as immediate expedients, looking to the speedy delivery of the woman, or promotive of this end; and the physician who would trust his patient to these, with the view of prolonging gestation, is but trifling in the presence of a fearful danger.

That we may the better appreciate our certain, safe and speedy manner of terminating pregnancy, let us glance at the steps by which it has been attained, through the labors of great and good men, whose highest ambition was to improve their profession in the saving of human life and suffering.

Guillemeau, the pupil of Ambrose Pare, following the teachings of his great master, advised delivery by the feet in all cases of dangerous hæmorrhage. His directions were to wait, if possible, until the mouth of the womb was *dilated* or *dilatable;* if this was not possible, on account of the dangerous character of the hæmorrhage—a condition, unfortunately, frequently present

—as women will not seldom die before the os is dilated or dilatable, then the hand was to be forcibly introduced into the womb, the feet seized, and delivery accomplished *fas et nefas.*" This was termed the *accouchement forcé*, and when Denman speaks of delivering the woman by art in these cases, this is the manner in which he expects it to be accomplished. To empty the uterus was then, as it is now, the imperious necessity, often admitting no delay—and this with the *then* state of the obstetrical art, was the only means of its accomplishment. But so fearful was the mortality, that many, appalled at the result, preferred, and even advised, in certain cases, to let nature kill the patient, rather than to certainly destroy her by art. Of twenty-five women thus delivered—collected by Simpson—twenty-one perished. But so persistent is error, that this fatal practice continued long after other and safer means of accomplishing the end had been practiced and taught—even down to our own day. Dr. Meigs recommends it, though fully aware that another and safer practice had long been taught—not from any indifference to human life, for in this he had a most conscientious regard; possibly, from his confidence in Denman.

So early an author as Mauriceau, followed by Clement, and finally brought prominently before the profession by Clement's great pupil, Puzos, taught that rupture of the membranes frequently arrested the hæmorrhage, and prevented the necessity of forcing the hand though an undilatable os. Thus was added another resource, invaluable in many cases, in the treatment of placenta prævia. It is not, however, a panacea, and, as stated by Barnes—who, we regret to see, is endorsed by Playfair—"the first thing to be done in all cases of flooding, sufficient to cause anxiety, before labor." For though, as had been long taught, valuable in many cases in arresting the hæmorrhage and hastening delivery, and in some the indispensible and only thing to do, in many others there is much else to be done before the membranes are ruptured; while it is not by any means necessary that they be ruptured at all by art, in every case. Rupture of the membranes is not then *the* resource in all cases, but one of our resources in certain cases. The exclusive views of Barnes and Playfair in this are, we think, but little better than that which they would depricate "to forcibly introduce the hand, in all cases bring down the feet and terminate the labor *fas et nefas.*"

The hæmostatic properties of ergot, by diminishing the size of the capillaries, renders it valuable in most forms of hæmor-

rhage, but its well known property of increasing uterine contractions, thereby condensing uterine tissues, renders it especially valuable in uterine hæmorrhages, and the cases of flooding are rare in which it is not of great value, and in not a few it is indispensible; it is often a valuable aid in the management of these cases.

Another resource is the tampon, plugging the vagina, recommended by Dewees, Capuron, Burns, Duges, Gardin, Ramsbotham, Hodge and others, among them Meigs, who, with strange inconsistency, while loudly berating it, recommends Braun's Colpurynter, which is only a mode of plugging the vagina. This constitutes an invaluable resource, and often sufficient of itself to arrest the hæmorrhage and hasten the labor to a fortunate termination. The objections to its use were, that it did not prevent the blood from escaping externally, but this is hardly an objection now, as we can so plug the vagina as to absolutely prevent the external flow. Another objection was, that though it might prevent the blood escaping externally, it endangered its accumulating in the womb, whereby the woman might die from occult hæmorrhage. This is a possibility only after rupture of the membranes, at which time it is hardly indicated.

It had often been observed that in cases where the placenta was entirely separated by nature, and expelled before the birth of the child, or when it was artificially separated through the ignorance of the midwife, or by the skilled physician, the better to enable him to introduce the hand and remove the child, the hæmorrhage was greatly lessened or entirely ceased. Many such cases had been reported by Portal, Mauriceau, Smellie, Collins, Merriman, Ramsbotham, Baudeloque, and others; in some of these cases the child followed immediately after the placenta; in such cases the cessation of the hæmorrhage was readily accounted for, emptying the uterus with uterine contraction, condensing uterine tissues; in others, the child was not born for many hours or days after the placental expulsion, and yet the hæmorrhage ceased alike in both cases. Sir James Simpson sums up 142 cases in which this condition existed, in which there were only ten mothers lost, or one in fourteen, against one in three, where this condition was not present, or twenty-one out of twenty-five cases where the hand had been forcibly introduced into the uterus through an undilated and undilatable os—the *accouchement forcé*.

Reasoning upon these cases of previous expulsion of the placenta with cessation of the hæmorrhage, Rawlins concluded that the blood source in placenta prævia was the separated portion of the placenta; this view was adopted by Hamilton, Wood, Radford and Simpson, and from this theory, false as it was, Simpson drew correct rules of practice; that to arrest the hæmorrhage in certain otherwise unmanageable cases, the afterbirth should be entirely separated and removed before the child. Thus was added another resource in the management of these cases.

Dr. Barnes strongly objects to this recommendation of Simpson's; that it is impracticable; cannot be done in the manner in which Simpson says it can and should be done. But things that such men as Bradford, Simpson, Waller and many others of high authority assure us they have repeatedly performed, cannot be considered impossible of performance. He reasons better when he assures us the entire separation of the placenta is not necessary; its separation from the entire lower segment of the uterus, the cervical zone, being all that is required to arrest the hæmorrhage. If this be true, and it doubtless is in many cases (though not with the exclusiveness, nor for the reasons given, and as it may be much more readily performed), we are indebted to Dr. Barnes for its limitation, and therefore more general applicability, by which another resource is added to our treatment of these cases.

Then we have the plugging and distention of the os uteri by sponge and laminara tents, or water bags, a most valuable resource in many cases, and indispensible in not a few.

Modern chemistry has furnished us with another remedy of great value, in the solution of the persulphate of iron, by which we may conduct some cases to a favorable issue that would otherwise be unmanagable.

With all these resources placed at our disposal, sufficent, perhaps, to meet every emergency, as varied and urgent as are these in placenta prævia, let us accept conscientiously the iron rule, to empty the uterus in every case of placenta prævia where the hæmorrhage is sufficient to cause anxiety, whether the pregnancy is in the sixth or ninth month, or at term; and in no case attempt to protract gestation farther than may be necessitated by the safe use of the means in accomplishing this result, or until in cases of great exhaustion from previous hæmorrhage we have time to rally the patient. In accepting this rule so emphatically stated by Denman we differ with him only in the

manner of its performance. But the *only*, here is everything, embracing all the difference between life and death, all the difference between killing our patient and delivering her by safe and easy methods, through which the chances of her preservation are enhanced at every stage.

In a case of urgent hæmorrhage previous to the ninth month, upon a vaginal examination we may find the cervix of considerable length, the os high up in the hollow of the sacrum, reached with difficulty, and not at all dilated, no labor pains are, or have been, present; here Barnes' and Playfair's rule to puncture the membranes as the first thing to be done would be exceedingly difficult of safe accomplishment. And were it ever so easy, it should not be done, as only mischief would likely result from it, as the womb is not prepared for labor, and taken by surprise might not respond to the wishes of the operator, and even if it did, hours would elapse before the neck was obliterated and the os dilated sufficient to admit the finger, during which time additional partial separations of placenta would increase the hæmorrhage, or, if as first supposed, uterine contraction did not come on, and, to arrest the flow, we were compelled to resort to a plug of any kind, the external flow only might be arrested, the blood taking the place of the escaped water, the woman might bleed to death with internal hæmorrhage. We would not then rupture the membranes in this but tampon the vagina. For this purpose the patient should, without any exertion on her part, be placed on her left side across the bed, with her hips near its edge, introduce a Sims' speculum, sponge out the blood from the vagina and with a long strip of cotton or linen cloth that has been saturated with vinegar, pack the vagina, first plugging the mouth of the uterus with the end of the strip twisted to a point for this purpose, or packed within the os and cervix with a uterine sound, then double the cloth backward and forward until the vagina is quite filled, thoroughly packed, leave the end of the strip hanging out of the vulva to facilitate its partial, or complete, removal. If this has been carefully done the hæmorrhage is necessarily arrested, and time given to rally the patient if she be much exhausted. For this purpose we may give her thirty or forty drops of laudanum, with brandy and beef tea. And then the presence of the tampon is provocative of uterine contractions which are very likely to set in within a few hours, when the tampon may be removed and

the largest size sponge tent that will be admitted should be dipped in carbolated glycerine and introduced in the cervix, or, instead, three or five or more laminaria tents; these should be held in place by a pledget of cotton saturated with glycerine. Of course there is no hæmorrhage now, and labor pains, if present, are greatly intensified, if absent, are sure to be induced, while the tents perform the double purpose of stopping the discharge and assisting, hastening, forcing the first stage of labor, dilatation of the os. If all goes well, as it most likely will, the tents may be permitted to remain several hours, or until labor pains are urgent, when they may be removed, two fingers introduced into the uterus, and swept around, separating the placenta from the lower segment, and the membranes ruptured at any point when the fingers reach the placental margin. At this time the presentation of the fœtus should be ascertained and if untoward corrected by bringing down the head or a foot. This can nearly always be done at this time by the bipolar method. Give now ʒi. Squibb's fluid ext. ergot, and if there is no hæmorrhage and the pains urgent, we may trust to nature, carefully watching the case. If the hæmorrhage continues, or returns, for it is well to know that while this will most probably be arrested by the artificial dilatation of the os, the partial separation of the placenta and rupture of the membrane, yet it may not be, if still present then and the os be sufficiently dilated or dilatable, we may proceed to extract the child, with the forceps if the head is presenting, if any other presentation by the feet. In either case using only so much *vis a fronte* as may be necessary to suppliment the deficient *vis a tergo*, being careful to have the contracted uterus follow down the retreating fœtus, and this, more especially, if there be signs of failing strength, exhaustion, as evidenced by a small, frequent pulse, paleness, etc. The placenta most generally follows immediately, a compress should be carefully adjusted, and laudanum, brandy and beef tea administered if necessary, and the patient watched until fully recovered from any unusual depression.

If in this case the hæmorrhage had been urgent but had ceased at the time of our arrival, we may commence with the tents. It may be asked, "why not do so in the first place?" We most likely may not have them with us, and their adjustment requires time, meanwhile the woman is bleeding, to stop this and husband her strength, we resort to the tampon as an

immediate expedient, always at hand, and can be used to certainly arrest the discharge, while we are preparing for more efficient measures, should such be necessary.

Suppose the patient in the ninth month, or at term, the hæmorrhage is alarming, as it is most apt to be at this time, and upon our arrival is still present, the woman, though not greatly exhausted, shows signs of exhaustion; upon a vaginal examination we find the os partially dilated, admitting readily two fingers, but rigid and undilatable to an extent to admit the hand; pains are present, but feeble; shall we resort to the *accouchement forcé* by forcibly dilating it with the fingers, introducing the hand, turning and delivering? By no means, for while we might do this, perhaps, without any great delay or difficulty, such proceedure would be extremely hazardous, would most likely destroy the life we were endeavoring to save, as the os is extremely intolerant of forcible distention in placenta prævia, is rendered exceedingly friable and likely to tear by the abnormal implantation of the placenta, and then a bruise or tear that would be of small moment when the placenta was at its normal site would be fatal now; hecatombs of women have perished for want of observance of this fact, and then there is no necessity for doing so, as we have other and safer means of accomplishing the end aimed at. In this case, as uterine contractions are present, we need not fear to rupture the membranes. Introduce two fingers into the uterus, sweep them around between the uterus and placenta, separating this as far as the fingers will reach and tear open the membranes at any point we can reach them; if we fail to reach the placental margin at any point, introduce a uterine sound along the anterior aspect of the uterus, until it passes the placenta, turn it over with the convex surface to the uterus when the membranes will be ruptured by the point; with gentle movement enlarge the opening, and give ʒi. fluid ext. ergot. As the waters escape, the increased uterine contractions drive down the presenting part against the placenta when it can be readily reached by the fingers; if this be faulty it should, if possible, be now corrected by the bipolar method, and the case left to nature; most carefully watching it; most probable all will go well. Should anything happen to render a more speedy delivery desirable, introduce the largest size Barnes' water-bag dilators, and gently dilate the os, remove it, and if the head present apply the forceps, if they

can be made to seize the head, a thing not always practicable on account of presence of the after-birth, in which case introduce the hand, bring down a foot, and extract the child, using only so much force and expedition as may be necessary.

Now suppose, upon examination, the os was found dilated, or readily dilatable, the pains weak and the hæmorrhage urgent. Dr. Yarnell, an experienced and skillful accoucheur, told me that he had a few days since just such a case; he was summoned in haste to see a patient, who had lost a large amount of blood and was still bleeding. She was at term, labor pains had been urgent, but had become feeble from loss of blood, and though symptoms of exhaustion were manifest, this was by no means great; the placenta was found attached centrally, and the os well dilated and readily dilatable; she had had many children and with the relaxation produced by the bleeding, the hand was introduced without difficulty, he immediately introduced the hand into the womb; separated the placenta, tore open the membranes, seized and brought down a foot, and gently, firmly, slowly extracted the child, having an assistant make compression on the womb, after the hips passed the vulva, a ʒi. of ergot was given, the placenta immediately followed the child, a compress and bandage were firmly applied. The child was saved, and the woman recovered without a bad symptom. Well, this is just what ought to be done in such cases. No time should be lost whereby the woman falls into great exhaustion, but she should be delivered immediately, just as this woman was delivered. The treatment of this case admits of no improvement.

Again, the woman may be at the termination of gestation, has had previous hæmorrrhages which have impaired her strength, and the accession of labor is announced by a fearful gush of blood which has reduced her to almost the last extremity; she has fainted, and though rallied from this, she is almost pulseless; her extremities are cold, lips blanched, and respiration labored, the hæmorrhage has ceased, and she is slowly rallying; upon examination the os is found fully dilated, or readily dilatable, the almost death grasp has relaxed the system, and the uterus offers no resistance to the introduction of the hand. Nature's guards are withdrawn from their post by life's ebbing current; under such circumstances nothing is easier than to introduce the hand, turn and deliver, and knowing that the woman is never safe, or at least that we cannot be

sure of her safety, from a return of the hæmorrhage until the uterus is empty; and remembering the obstetrical aphorism, "never to let a woman die undelivered," we are almost irresistably driven to do so; but to do this with her present extreme exhaustion is almost certain death. What then is to be done? We should first give the patient time to rally, assist her to do so; to do this give her forty to sixty drops of laudanum in brandy, lower the head by removing the pillows and bolster, elevate her hips by placing blocks under the feet of the bedposts, or these may be lifted into chairs, and as soon as reaction is established, rupture the membranes and give a dose of ergot. We have in this case given no directions for separating the placenta, and would not attempt to do so, as this has most probably been accomplished by the advance of the labor, which would soon have terminated happily, without further loss of blood, but the hæmorrhage had outrun it, had paralyzed muscular fibre, thereby arresting uterine contractions, and then by unnecessarily sweeping the finger around, between separated placenta and uterus, we would break up the clots that plug up the patent uterine sinuses, and provoke bleeding, which, if undisturbed, may "hold the fort," until the woman has so far rallied for returning uterine contractions to rapidly complete the delivery.

If, however, the woman was bleeding at this time it would indicate the necessity of sweeping the finger around the lower segment of the uterus, previous to puncturing the membranes; during the discharge of the water, firm pressure should be made over the uterus, so as to keep up as much as possible the "stimulus of distention." After the woman has rallied and the water discharged, it is almost positively certain, in the case under consideration, that the presenting part (if this be the head or breech, and, if any other, it should be corrected by the bipolar method, or external manipulation, at the time of rupturing the membranes), has been driven down into the mouth of the womb so compressing the placenta as to prevent any further loss of blood, were this otherwise likely to occur. We may now leave the further progress of labor to nature, carefully watching, and giving such assistance as may be necessary only, and this will, most likely, be confined to giving stimulants and nourishment to our patient, whereby the womb will be enabled to take care of itself.

Now we have been so positive in our advice not to turn and deliver under this condition, and so many women have perished unnecessarily from being hastily delivered during great exhaustion, that it may be well to give cases and authority in support of our opinions.

Murphy (Principles and Practice of Midwifery) says: "Let us now direct your attention to a case in which the patient is suffering all the worst consequences of flooding, if you were at once to turn the child and deliver, *the fate of the patient would be sealed.*" Dr. Rigby justly observes that "the success of turning depends upon its being done before the patient has lost too much blood;" and, says Murphy, "the fatal effects of performing it too late, when the patient is extremely exhausted, is best understood from a few examples:" Gifford relates a case of this kind on which he remarks, 'although I dispatched this delivery in a few minutes, and without the loss of any quantity at that instant, yet the poor woman, from the preceeding excessive loss of blood which had occasioned convulsions and great loss of strength and spirits, died in half an hour after she was delivered.' Smellie's case is quoted in which he delivered the child by turning, upon which the flooding stopped, but she was so weak that she expired in a few minutes. Two cases are given from Rigby in which there was extreme exhaustion, both were delivered by turning, one died in six hours, the other in half an hour, and Rigby remarks, 'so far from turning having been prematurely done I am convinced its want of success is owing solely to its being performed too late.' Says Murphy, "This list might very easily be lengthened, the records of practice afford numerous examples of the fatal effect of turning in extreme exhaustion.

Prof. Thomas says: "Should dilatation of the os have taken place, and the patient be exhausted from sanguineous loss, the practice of rapid artificial delivery will not rarely be followed by a fatal prostration." Playfair says: "Much harm has been done by turning when the os is imperfectly dilated, or when the patient was so much exhausted by previous hæmorrhage as to be unable to bear the shock of the operation. If she has a small, feeble and thread-like pulse, turning is certainly inapplicable, unless all other methods of controling the hæmorrhage have failed and even then it would be well to attempt to rally the patient from her exhausted condition before the operation is commenced."

Ramsbotham gives both the fact and the reason. He says: "We may, perhaps, find her faint and cold and gasping, the uterus quite inactive, with its mouth widely open, and possessing that degree of unresisting flabbiness which, to an experienced hand, is indicative of urgent danger; *under this condition delivery would indeed be easy, but it would at the same time be followed by almost certain death*, for, if we empty the uterus under syncope or deep and long-continued fainting, we cannot reasonably suppose it will take upon itself that degree of action necessary to close its vessels and insure permanent safety; our indication here would be to arouse the patient, to bring her to a certain point—stimulants are absolutely called for. Under such circumstances, although it is a maxim in obstetrics never to allow a patient to die undelivered, *it should also be another maxim never to empty the uterus during syncope*, for it is not the mere extraction of the child, but to leave the woman in the best condition for recovery; but another danger (besides the woman dying of hæmorrhage) must be added. The sudden emptying the uterus of the whole of its contents nearly together, and that, too, when the constitution, weakened by hæmorrhage, is easily affected by any depressing action. We well know the effects of suddenly evacuating the water in ascites, that the most hearty persons will sometimes fall into a state of syncope by the sudden removal of the pressure—the same condition exists when the pressure of the gravid uterus is removed by the evacuation of the liquor amnii and the extraction of the child at a time when the system is suffering from depressing causes, and we cannot wonder that collapse occurs as a consequence, even though the delivery be perfected with but slight additional loss of blood."

The quotations will doubtless be accepted as sufficient to justify—fortify—our urgent advice not to hastily empty the uterus during great exhaustion; let none forget or disregard the admonition, as the penalty for so doing is *death*. Well, what should be done in addition to what has been recommended in such cases, as in those more desperate still, where we cannot, dare not do even this? To answer this question, we will suppose a case in the last extremity. The woman has had frequent hæmorrhages, and falls in labor at full term with a fearful hæmorrhage, faints, rallies, faints again, and is found by the accoucheur almost *in articulo mortis*, pulseless, labored respiration, surface cold,

eyes sunken, features pinched, lips blanched, and, without an ounce of blood to lose and live, is still bleeding. To deliver her is certain death—not to do so is to let her die—can anything be more appalling? and yet this woman should not die—shall not die. To show what may be done, even here, we will give a case.

Some three years since we were called in consultation with Dr. E. Montgomery, an able and experienced accoucheur, and a gentleman who reflects equal honor upon his profession and his race, to see Mrs. ——, in her last confinement. She was seized with flooding at the seventh month, which ceased, to appear with increased violence at the eighth month. This was controlled, when it appeared once or twice during the ninth month, and at term the beginning of labor was announced with a frightful hæmorrhage. The woman being ensanguined by previous floodings, was illy able to bear this frightful drain upon the exhausted treasury of life, and soon fainted; and when seen was pulseless, the surface cool and the extremities cold to the knees and elbows, countenance blanched, lips white as the sheet upon which she lay, respiration labored, sighing—indeed, seemed to be moribund. A tampon had been introduced in the vagina, yet the hæmorrhage continued—a feeble stream of blood trickled over the nates, not in sufficient quantity to do mischief, had not the woman lost every ounce she could lose and live, the bed and clothing and person of the patient being saturated or stained with blood, that still oozed from a system drained to the last extremity. Labor pains, which had been present and urgent, had ceased; nature, exhausted, could no longer support the effort, and, paralysed, had paused almost amidst the stillness of death. Syncope, repeated and prolonged syncope, was only partially recovered from. In almost the very hour and article of death, our patient cast no imploring look upon her medical attendants. She stood upon the border land, where life or death were equally matters of indifference, and yet she was still bleeding! What was to be done? What could be done, in the presence of so many and such formidable dangers? With the death relaxing condition of the parts, nothing was easier than to introduce the hand, turn and deliver, and with the obstetrical maxim, "never to let a patient die undelivered," the temptation was to do so, and yet nothing was surer death. To empty the uterus in this condition was to shut the gates of hope against her—was to certainly kill her—and yet to kill or only

let her die seemed a matter of but little difference, as death appeared inevitable, was at hand. To let her alone was to let her die—quietly die—to remove the tampon, break up and remove the clots, separate the placenta and puncture the membranes was certain to increase the hæmorrhage, and by removing the stimulus of distention increase exhaustion and surely destroy the patient. Could anything be more desperate, more hopeless, and yet, with my Uncle Toby, we swore this woman should not die, and for this determination we claim no credit—deserve none—as we had not invented or discovered a single agent to deliver or secure her safety, but were indebted entirely to the labors of others. She was immediately given sixty drops of laudanum, with brandy and beef tea; the brandy and beef tea were repeated as often as she could be induced to swallow them, for she was semi-conscious only, and swallowed with difficulty; the head was lowered, and the hips elevated by raising the foot of the bedstead; and, having prepared a pint of the solution of the per-sulphate of iron—one part of iron to two parts water—and filled a Ferguson syringe with the solution, and having prepared several pieces of cotton by wetting in the solution and pressing them dry, we removed the tampon, passed the hand into the vagina, and two fingers into the widely dilated os uteri accompanied by the nozzle of the syringe, we rapidly swept them around between the placenta and uterus, not separating the placenta, for this was already separated from the entire lower segment of the uterus; but removing the clots from between the separated placenta and uterus; following the fingers with the syringe—Dr. Montgomery working it—continuing a constant stream of the styptic, which came in contact with the bleeding surface as fast as the fingers pressed away the clots; the syringe was removed, and instantly—my hand still in the vagina and the fingers in the uterus—a pledget of prepared cotton was carred into the uterus and spread over the placenta, packed between its separated surface and the uterus; over this another was placed, closing the os, and on this a tampon, saturated with glycerine, was placed, to hold everything in position. The margin of the placenta was no where reached, nor did we desire to do so, as the object was not to empty the uterus, but to entirely, absolutely, arrest the hæmorrhage until the woman had time to rally. There was no hæmorrhage during or after the operation—absolutely none—none was possible.

For the successful after-treatment the patient owes her life to the family physician, Dr. Montgomery, who remained constantly with her, administering nourishment and stimulants as occasion required. The bladder was kept empty with the catheter. This was on Sunday—during the day and night there was no accession of labor; the patient was too much exhausted for this; but, as there was no longer any loss of blood, the patient slowly rallied, until, by Monday morning, or twenty hours after the operation, labor set in, the plugs were expelled, followed by the mumified placenta, and this by the fœtus—dead, of course. The placenta was dried, mumified in every part, except from half an inch to an inch of the margin. The woman recovered, and is now living and hearty.

Now, we ask, would this woman have lived had Barnes' and Playfair's advice, to puncture the membranes as the first thing to be done in all cases, been carried into practice? Would not the removal of the stimulus of distention alone, in this case, have been quite sufficient to destroy the woman? And then, could she have survived labor, had this been induced by rupturing the membranes? To rupture the membranes was then not only not the first thing to be done, but was not to be done at all. The treatment here was novel, suggested by the extremity of the patient—and could any other treatment have saved the patient? But nothing more was necessary; and if this patient was saved, may we not hope the time has passed when any woman need die, merely because she has placenta prævia? Let us so hope.

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