AN INAUGURAL DISSERTATION
ON
Puerperal Hemorrhage.

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BY
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To John M. Watson, Professor of Midwifery and disease of women and children, in the University of Nashville, in honor of his high professional attainments as a teacher and practitioner I respectfully dedicate my thesis.
The subject which I have chosen for my thesis is one of great importance, and one too, upon which a great deal has been written by different authors. And I will say in the beginning, that I am indebted to them for such facts as may be brought forth on the following pages.

Yes, when we consider the numerous times it is liable to occur and the fatal consequences, too often resulting from it, we very plainly see, that it is a subject of the deepest interest, to anyone who enters upon the study of our glorious profession. As in a severe case, when we see the breaking up of the fountains of life, and the red stream flowing every moment.
We know is bringing a fatal termination. These are the moments when often all the skill of our profession is unavailing. And the most experienced are too often compelled to witness such ravages, and but acknowledge there utter helplessness. But he that understands his profession notwithstanding he has been compelled to see his patient pass from the stage of existence, can but congratulate himself, that the brightest stars of our profession fail, and with all the science and glory of our profession we cannot counteract the will of providence.

The word for our profession more could be, but that it is the noblest of sciences, who could speak of it— but with the deepest.
reverence, when they consider it to benefit suffering humanity. Who can cast a glance over the pages of past generations, from the time of the Socrates, and see the vast increase, the rapid progress, with which our profession has traveled, and not be compelled to acknowledge it a noble science, who is there but can look forward in his imagination, and behold hidden treasures, concealed, behind the dark recesses of the future, and not long to see them brought to light, Ah! more to assist in their development.

We comprised under the head of purpura hemorrhage, all discharges of blood from a woman in the purpural state, therefore not meaning by it, simply a discharge from the uterus and its appendages.
but from all of the principal viscera. Thus if a woman in the puerperal state
has haemoptysis or haematemesis, we still comprise it under the same head, although
it may be a vicarious hemorrhage to
displace the place of a natural discharge.
The causes of puerperal hemorrhage
are divided into predisposing, determining
and special causes. And first let us
look at the predisposing causes. Then
we may say, that any disorder in the
circulation, dependent upon uterine
gestation, was predisposing to hemorrhage.
We well know that after conception the
normal functions of the uterus are increased
cauing an increased afflux of blood
to the womb, and to sanguineous
temperaments. This does not always result
in mere hyperemia of the
Means membrane, but may cause rupture and of course hemorrhage again in the early months of pregnancy. The embryo has but very feeble connections with the womb. Therefore it must receive its nourishment, by inhaling the secretions from the internal surface of that organ. Consequently, this requires an increased action on the part of the uteri, and necessarily increased circulation. Then any exciting cause acting so as to derange the harmony existing between the ovum and womb may bring on flooding.

Then again the placenta may be a medium, through which flooding may take place. The vessels are developed from the chorion and uteri, the vessels coming from each.
surface run together simply interlacing but do not insculptate. They are then held together by a substance like lymph, which was a secretion of the womb—how we know. There is a certain balance that must be kept up between the mother's posture, and any cause disturbing it and causing this balance to be overthrown immediately predisposes to hemorrhage, for the blood rushing into the newly formed vessels may force so strongly, upon the walls of these vessels, as to cause them to give way. Then we see during pregnancy that the various developments, from the decondensing of the womb, requires an increase in the vascular organization, in fact the whole organ becomes very highly organized and minute capillaries before impend traverse the organ in various directions.
Then considering the increased vascularity of the womb, and of course a partially constricted state of the organ, we might naturally suppose that any cause acting so as to cause a rush of blood to the womb, might cause a rupture of the walls of the vessels. Then again the peculiar distribution of the blood vessels, in the uterus and placenta predisposes to hemorrhage. Thus we know that the main arteries supplying the womb, ramify into various branches whose diameters collectively amount to more than the diameters of the main trunks. Then the blood flowing from the main trunk into the ramifications, of course the motion will be decreased. But quite different is the distribution of the veins trunks for the disproportion is just the reverse, and of course the blood will be increased in motion.
Then we may naturally conclude that the arteries cannot be entirely exempt from rupture, unless they were the seat of some morbid lesion, and that the veins only having one or two veins, could be very easily ruptured. But we are not to suppose that rupture is the only way in which hemorrhage may take place from these parts, but that it may and frequently does take place by extravasation. Then we may say that it may occur, if extravasation, from rupture of the veins, and more frequently the uterine placental arteries, and the veins of the arteries ramifying in the decidua externa to the placenta (according to Cazeneau). I neglected to say that compression of the uterine placental vessels might take by the contractions of the uterus.
For of course, when it contracts, the blood is forced into the uterine placental vessels, and sometimes gives rise to rupture or at least hemorrhage in some form. In case of rupture of one of the veins, we might say that the resisting force is in the arteries and not in the veins. For was it not for the compensation offered by the arteries, viz., that the force of determination is first felt in the arteries, subsequently transmitted to the veins. Doubtless we would have hemorrhage very frequently.

I trust our inquiry may be, why showed all these conditions incident or rather coincident with pregnancy predisposed to hemorrhage, simply because so soon as conception takes place the uterus becomes.
the seat of irritation, and seems to be a center upon which all disti
ers settle in the form generally of
congestion, and any cause acting so as to derange the balance, may cause
such an increase of blood, as to
cause rupture and of course hemorrhage.
A great many things might be enumerated as predisposing causes to this
hemorrhage, such as over exertion
of any kind, too generous diet, the use of alcohol, drinks, also local
irritants of any kind, all of which
act upon the womb indirectly. Thus,
they first produce there influence upon
the general economy, and lastly by
reaction, act upon the uterine, causing
the organ to become congested, and of course easily subjected to exciting causes.
We will next speak of some of the determining causes, and perhaps it will be better to be more limited. As for determining causes we may say that a predisposing cause continuing to act, may at last become a determining cause. But only this. But any impression acting upon the entire organism or directly upon the uterus, may determine this hemorrhage. And I believe it is said, that when the cause acts upon the entire system first, and subsequently, upon the womb, gives rise to the more serious hemorrhage, and these act not by simply engorging the uterus placental vessels, but the effect is first produced upon the uterus, and lastly upon the uterus placental vessels. And I believe it is said that in the
early months of uterine gestation. That congestion of the uterine placental vessels more frequently results in exsanguination whereas in advanced periods such a congestion, even when more likely result in rupture of these vessels. But I presume we might say that, determining causes, could have but have but little effect, unless there was previous existing a predisposition. Thus we see in some patients, a very slight wound given rise to a severe hemorrhage and others who sustain severe shocks with no bad results. This I think would be entirely dependent upon predisposition.

Our next head comes under that of special causes of suppurative hemorrhage, which are generally
Manifested in the latter months of
uterine gestation, perhaps from an
abnormal condition of the cervix relative
to the womb, or abnormal insertion of
the placenta. For instance, suppose the
placenta to be inserted over the neck
of the womb, now because, in first
place, the inferior portion of the womb
does not participate in the enlargement
until the last three months, and the pla-
centa having received its growth previous
to that time, so soon as that portion com-
cences participating, immediately the
vessels of the placenta are liable to be
ruptured, for the placenta cannot
follow unless a detachment take place
which will also result in hemorrhage.
Of course, this must be a special cause.
In any case of pregnancy where,
The foetus dies, as a matter of course.

There will be no hemorrhage, because the increased vascularity and irritation of the wound is reduced, for the increased action of secretory organs, necessary for the sustenance of the foetus is no longer required and of course removes the cause of hemorrhage.

Again rupture of the cord or some of its vessels may cause hemorrhage. This occurs sometimes, perhaps from disease of its walls or shortening, and this shortening might be caused by frequent turns of the cord around the child.

But I presume that when there is a rupture of the cord, that there generally exists a disease either in the walls or surrounding tissues, for the immediate movements of the foetus, caused by the frequent turns
of the cord around it, might cause such traction upon the cord, as to cause its rupture. It has been said by authors that the brevity of the cord, might cause a premature detachment of the placenta, but I believe this opinion seems to be objected to by Carcass. He says that in consequence of the pressure to which the placenta is subjected, by the amniotic fluid internally, and the womb externally, that the detachment would be almost impossible, by the tension of the cord. He reasons thus, he says that the tension of the cord, only takes place during the advancement of the child, and that the placenta is subjected to a pressure at that time, equal to the tension of cord. Thus he conceives detachment at such a time impossible.
But Carcaux does admit, that there may be a detachment of the placenta infirm or during labor. Thus in extreme force of the cord, and very immediate movements of the foetus, it might be detached, for then we see, the pressure of the fluids and womb, would not be present. But he conceives this must be prior to the escape of waters, for then the pressure of the foetus itself would overcome. The force of the cord's action, unless in a case, as when the child is born in a caul, the head pushing the membranes, before it, reflects this force to the placenta, and may cause its detachment again. Rapid contractions of the womb may cause hemorrhage, by beating up the cellular vascular attachments.
of the placenta. Now this contraction is a physiological action, but when carried to far, may cause detachment of the placenta, which more frequently takes place in droopy of the amnios, because when the water escape, the diminution causes the contractions to come on.

I shall next speak of some of the symptoms, and we well know that they are divided into general and local. We may enumerate some of the symptoms as: first those that precede the flushing, as when a woman has all the symptoms of uterine congestion, she feels heavy and dull, straining at stool, desire to pass wind, and general uneasiness in her limbs. But not only this—But.
Connected with it are all the symptoms of general plethora. These are the general symptoms preceding the flooding. But soon these symptoms of congestion give way, and the immediate symptoms of flooding appear, such as pallor of skin, feeble pulse &c.

The local symptoms may be divided into external and internal, as regards.

The external hemorrhage, the mere flooding or escape of blood, is sufficient to diagnose the case. But quite different in an internal hemorrhage, in the earlier months of utero gestation, there may be an escape of blood unperceived, though very frequently it forms a clot and consequently causes pain. Besides this, there is a general sense of fulness. This is in the early months, but
in the latter months, frequently we have great tension of the abdomen. Sometimes fluctuation. Then suppose hemorrhage to take place in labor, the commencement of each pain is characterized by the escape of blood. As regards the seat of effusion, we well know it must be different under different circumstances. Thus between the uterine surface of the placenta and the uterine, and in such a case perhaps the escape of blood externally might be very little, because it might be affixed on the middle of the placenta. While the surrounding edges would remain adherent. Then again it might be into the substance of the placenta, constituting placental apoplexy, and into the amnion itself.
Perhaps it is useless to go into a detail of the seat of affection and therefore will at once come to the diagnosis. There is great difference in diagnosing a case of hemorrhage, as regards the time at which it occurs. If it occurs during the first six months, perhaps these may be some obscurity in diagnosing it. Because we would not know but that it was a natural discharge. But when our attention is turned to a hemorrhage in the last three months, we know (unless a very rare occurrence) that we must arrest the discharge. Therefore our next inquiry would be, what causes this discharge, and I believe that authors agree, that in hemorrhage occurring during the last three months.
is most generally caused by an abnormal insertion of the placenta over the cervix uteri. This may occur center for center or be attached by one of its borders, and I believe the flooding appears sooner in the former. Another peculiarity, as regards the insertion of the placenta, when it is inserted center for center, the flooding is more profuse during uterine contractions, whereas in the other form, the flooding is more profuse during the interval. In making an examination per vaginam in case of insertion of the placenta over the os uteri, you will find the os thick and spongy, caused by the hypertrophy of its walls, which enlargement was owing to the afflux of blood.
to it, from the irritation, caused by the presence of the placenta. Perhaps the blood may be very bright; all these symptoms I have enumerated are relative to external discharges. As for internal discharges, I believe I have mentioned the most characteristic signs under the head of symptoms, thus we would have enlargement of the abdomen, and all signs of loss of blood. But we are not to suppose the mere enlargement of the abdomen is hemorrhage, because there are other causes that might have this appearance. But I do not deem it necessary to dwell upon this internal discharge. As regards the prognosis of this discharge, of course it must be.
Very different, under different circumstances. Thus if a very full pellagric woman have hemorrhage perhaps it might benefit her, but in a puerperal person, it might end very badly. Then I believe the general idea is that the prognosis is unfavorable. We know that it is more dangerous in the latter months of pregnancy, and when the placenta is inserted over the os. More than when inserted at the side, and again we consider, internal hemorrhage the most dangerous, because it may form a clot, which may cause irritation and finally contraction of the wound, and again owing to hemorrhage, so much tension necessary concerning the prognosis.
But we know that there are circumstances complicating hemorrage, and rendering it more fatal.

Treatment.

As regards the treatment of hemorrhage, I hardly think it necessary to go into the various plans. As I have not room, but suffice to say, position has a great deal to do with her, she should be in a horizontal position, hips elevated generally. Quietude of both mind and body, again the treatment is different at different periods. But in all we give acidulating drinks, keep bowels open, use the catheter if required, and be diet, and more especially if your patient is pellagric, use the 'suceet', alimental hemorrhage, many authors advise...
Ergot after the membranes are ruptured, and the os dilated, but I think I should go with Dr. B. of New York, he uses Laudanum in very large doses, say a tea cupful every 15 minutes, until the hemorrhage ceases. This he conceives to be the best remedy in hemorrhage, the same as if you have a severe case, and the placenta is detached, he would introduce his hand and make friction upon the part, at the same time causing some one to dash water upon the abdomen, by this means bringing on uterine contractions, and arrest of hemorrhage. The treatment must comprise to many pages to give a full description here, therefore I propose concluding my subject.
But first let us think how important this form of hemorrhage is, considering its too often fatal results. How important it is for us to understand the intricate works of human fabric. The various ways in which this hemorrhage may occur. Certainly if he is ignorant of these, he has no basis upon which to build. Now I conceive there is nothing that requires greater skill than a severe case of uterine hemorrhage. Let us suppose a case; a woman perhaps a dear friend lies prostrate before you, her life is placed in your hands. If you are ignorant of her case, was it by vile partiality or persuasion that she was led to place her life in your hands. She is sinking
into that long sleep from which she will never awake. The lamp of life is almost extinguished, but still a glimmer can be perceived in the distant waning as if every moment was the last.

There she lies a victim of that passion instilled within her from the garden of Eden. Whose how powerful is he who can arrest that approaching destiny almost sealed by nature's course. If you are succ = full. The pathway to future glory and honour is laid, but if not let echo answer the resulet——

Finis.