

AN
INAUGURAL DISSERTATION
ON

Uterine Hemorrhage during Pregnancy

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BY

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OF

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To
John M. Watson M.D.
Professor of
Obstetrics, and Diseases of Women & Children
In the
Medical Department of the University of Nashville
As a Testimony of respect
For His,
Talents, and Professional Attainments
This Thesis is Respectfully
Inscribed
By the Author

Uterine Hemorrhage during Pregnancy.

It is not expected, I suppose, in writing a Medical Thesis, upon a Subject so much treated of by Authors, and so well understood at the present age, by those learned in Medical Literature and practical Medicine, as the one I have selected, that ^{the} Student, would be able to present much new or interesting matter concerning it. I very much regret, that I shall not be enabled to form an exception to this rule; but if I shall be able to present the Subject in a plain succinct manner, according to the teachings I have received from approved Authority, I shall feel satisfied.

This Subject presents a wide field for discussion and elucidation; too much so for me to attempt to travel over the whole ground, or to give it a minute investigation. I shall therefore confine myself to the consideration, and treatment in general terms of accidental hemorrhage during pregnancy.

Accidental hemorrhage, is that which occurs from the detachment of the placenta, when situated at the fundus or body of the uterus; so that in the natural development of that organ, it will not necessarily be separated, as in the unavoidable species; when the placenta is placed over the mouth of the womb, and when at about the fifth month the cervix uteri begins to expand, there will be more or less separation, and hemorrhage occurring as a natural consequence.

Hemorrhage may occur at any period from the first month up to the full period of utero gestation; but it is, ceteris paribus, generally in proportion to the advancement of pregnancy; yet a very alarming and dangerous flooding may occur even prior to the sixth month; but when it takes place after this, although at first it may be moderate, we have no security, that it will not soon become severe, and the danger imminent; for the vessels have attained a volume, that would ~~that~~ admit of a dangerous hemorrhage.

in a very short space of time.

uterine hemorrhage, as before intimated, depends upon the more or less detachment of the placenta from its connections with the uterine surface. The remote causes that tend to produce this state of things are numerous and various; to wit, mechanical violence, fright, mental emotions, langings, plethora, this a very common cause, and when there is plethora of the system at the monthly periods; when the woman is more liable to abortion during the first months of pregnancy, it is a very prolific cause, and is perhaps the most common usual agent producing that event; nervous temperament, chronic disease of the uterus, constitutional derangement of the system, such as Syphilis; putting off marriage to a late period in life, and to use the language of an able Professor, "the organs perform their functions awkwardly and cannot complete the process for the first few times", too early marriage, the organs not sufficiently matured to perform this important duty well. These and

other causes, have called into action, the contractile powers of the uterus; threatening, and producing abortion and more or less hemorrhage. We know that these things have, and will bring about this event, but their modus operandi, of these operations ^{is} ~~are~~ not so well understood, or at least, by me so easily explained.

But the proximate and prime cause of uterine hemorrhage either during the first months, producing abortion, premature labour, or delivery at full term, is uterine contraction.

The connections between the ovum and the uterus are intimate and very vascular. Upon conception the uterus throws out a membrane lining its whole internal surface called the decidua. The ovum enters the uterus, surrounded by its own membranes, the amnion and chorion; the chorion and decidua soon become connected by vascular attachments, which serve as a band of union between the ovum and the uterus. During the first month, the umbilicus is thrown out to con-

rest with the membrana serotina, which is the rudiments
of the future placenta. From the first to second month
the placenta is partially formed, and ^{by} the fifth month is com-
pletely formed; but up to this period the membranes surround
the foetus, and ^{are} in close connection with the whole uterine
surface; and puncturing, or any cause producing a separa-
tion, would result in more or less hemorrhage. A rupture
of the membranes during this period near the cervix uteri
would not be attended with hemorrhage to so alarming
an extent, as were the separation from the fundus; and
there would be more probability of saving the woman. But
should the detachment be from the fundus or body, the
descent of the blood would increase the separation down
to the os-tinctia, and render the case more difficult.

What is the reason, that hemorrhage is so constant
a result of pain or uterine contraction during the earlier
months of pregnancy? This question has been answered, as
I conceive very rationally, and to me satisfactory, to wit,

during the first months, the placenta is spread ~~out~~ out
over the surface of the uterus, and so closely & intimately
attached, that the smallest contraction cannot take place
without causing "a shaw", and if great, more or less hem-
orrhage. Whereas at the full term or near that period
the placenta becomes lobular; and there is sufficient
space between the lobes, to allow of considerable con-
traction of the uterus, without producing a detachment
and consequent hemorrhage.

The immediate effects of a great loss of blood are
great prostration, feeble pulse, great palor of the coun-
tenance, lips and tongue, difficult breathing, constriction
across the chest, syncope, and frequently death. But the
quantity of blood lost is not so much to be dreaded as the ef-
fect it produces upon the system; some constitutions more
able to bear the loss than others; Besides the quantity lost, the
danger depends upon the celerity with which it flows; if
the loss be sudden and rapid, the immediate prostration

will be greater; but continued drainings affect the general constitution more, and the patient will not recover from the effects as soon; and there is more danger of constitutional sequency, of a serious and dangerous character; such as dropsies, pulmonary affections, and organic lesions of the uterus.

Diagnosis. It is ~~necessary~~ to distinguish accidental from unavoidable hemorrhage &c. In the unavoidable, the presence of the placenta over the os uteri will be indicated by the fleshy, fibrous, and lobular sensation communicated to the touch, and ^{cannot} be easily removed by the fingers. The membranes present a smooth elastic sensation, and may be distinguished from coagula by not being so easily pushed up or broken down by the fingers, this will serve also to distinguish the coagula from the placenta. The membranes may be told from a foetus engaged in the mouth of the womb by being more elastic, and ^{not} so firm & hard. But perhaps the main distinction between, accidental and unavoidable hemorrhage, is, that during contraction of the uterus,

The hemorrhage ceases in the former, and is increased in the latter.

Treatment. In the consideration of this subject in regard to treatment, I shall divide it; First, into that period embraced, between the first and fifth month; Secondly, from that period, to the end of utero gestation. This division is not so numerous as most authors divide the subject; yet I deem it sufficient to suit the general manner in which I shall feel disposed to treat it.

In ordinary hemorrhage, nature attempts to arrest it by the formation of coagula in the mouths of bleeding vessels, and injections around the artery in the cellular substance, and the pouring out of lymph to cause permanent adhesions.

But in the uterus not much hope of a natural suppuration by these means; for there is not much cellular substance for the bleeding vessel to bury in, or to become infiltrated around; nor any hope of lymph being thrown out as this ^{is} the result of an inflammatory process, and -

would not occur soon enough to be of any avail, as death would take place before it commenced; coagula would be of advantage, and should ^{be} aided whenever practicable.

But the great means of arresting this species of hemorrhage is, that same agent, which is the great proximate cause of its occurrence, to wit, uterine contraction, to produce this under same circumstances, is the grand object, and the only means of affording relief or safety to the patient.

The indications in the treatment, are first, to relieve pain, and quiet the contractile excitement of the uterus; and the exhibition of opium would be the means for accomplishing this object; secondly, to arrest the hemorrhage; to do this a variety of means are necessary, Venisection, cold applications, astringents, frictions, mechanical obstructions, and delivery.

During the first month there is not much danger from hemorrhage; but there is danger of the loss of

The avum; more especially at the occurrence of the menstrual Malina, or effort at menstruation. If there should be symptoms of abortion at this period, such as pain in the lumbar region, with a sense of bearing down, and evidence of uterine contraction; if the subject be plethoric, blood-letting should be resorted to, to control the vascular excitement; and Opium be given to relieve the pain, and during the interval the bowels should be kept open, light diet, and rest enjoined.

After this period to about the fifth month, which embraces the period of our first division; if the flow of blood be moderate and the pains slight, it may usually be controlled, by the exhibition of Opium to relieve the pain, and Acetate of Lead to restrain the hemorrhage, in the proportion of a half to a grain of the former, to from two to three grains of the latter every two or three hours, according to the urgency of the

symptoms, until relieved, or they be found ineffectual.
But when the hemorrhage is profuse they will not be of
much avail, as time cannot be given, for the system
to come under their influence; they at least cannot
be relied on to the exclusion of other remedies, yet
they might frequently be given in connection with
other means, acting an auxiliary part. They would
conserve, better in this condition, to be given, by injection.

In all cases of uterine hemorrhage, an exami-
-ation should be made per vaginam, to ascertain the
condition of the Os uteri, as its condition will often
influence our treatment. If ^{the} embryo or membranes
be engaged in the mouth of the womb, and it be
relaxed; we should at once deliver them, as ^{we} fre-
quently can be done, and at once put a stop to
the bleeding. But when the flooding is profuse, with
Os uteri, dilated, or in a soft detachable condition;
the Ergot should be given to produce the expulsion

of the acuum, which will most generally be the case.

But when the hemorrhage is considerable, and the
mouth of the womb closed & rigid; the patient
should immediately be placed in a horizontal posi-
tion, upon a hard bed, or mattress, thinly covered,
the room well ventilated, restricted to cold acidu-
lated drinks, and mild unirritating diet, which
should also be given cold, and absolute rest and
quietude strictly enjoined.

The patient being thus situated, our next
indication will be to reduce the arterial action, and
most generally this condition will exist with a pleth-
oric state of the system. Venesection ~~will~~ should
now be resorted to, and carried to an extent to
make a decided impression upon the system; for
I am of opinion, where bleeding is indicated, it
should be for the effect, not the quantity, taken
in all cases; and it should be repeated, if upon

reaction the hemorrhage returns. The acetate of lead should now also be given pretty freely, during this period, together with opium to relieve the pain. We cannot tell the amount of separation of the placenta, and every effort to save the ovum should be practiced. I do not believe that opium has any peculiar efficacy in hemorrhage, but it will relax and suspend the contractions of the uterus, under ordinary circumstances; and may thereby prevent any further separation of the placenta, and if the bleeding can be checked, coagula will ^{be} formed, the case perhaps entirely arrested and the embryo ^{be} saved.

The acetate of Lead, I regard as a ~~styptic~~ ^{styptic} of great power, and in uterine hemorrhage, it might almost be regarded as a specific, and should be given at least a fair trial; during this stage it would be preferable to administer it as an anema.

If the hemorrhage continues, cold affusions, ~~should~~

or water and ice in a bladder, should be applied to the pubes; cold applications, I regard as having a two fold benefit; first, in controlling the arterial action, but to secure this, they should be constantly applied, after having been once commenced, to prevent reaction until their full efficacy is obtained; but there is a limit to their application, when there is great prostration, and they produce chilliness, and other unpleasant sensations; secondly; by the shock given to the system, producing uterine contraction - and benefit could be more readily obtained in this way, by injections^{also} of cold water into the vagina. Should these means fail to arrest the bleeding, the tampon should be introduced; a handkerchief, sponge or strips of linen will usually answer the purpose. But should the mouth of the womb be relaxed, the cervix uteri altered, or the membranes ruptured, there will be no chance

to save the ovum; yet we must controll the hemorrhage; and the tampon should be introduced for that purpose, and await the action of nature to bring on regular contractions of the uterus, to expell its contents.

I regard the Tampon as a mechanical agent, stopping the flow of blood, ~~thus~~ forming coagula to the mouths of the bleeding vessels, and checking the hemorrhage. And I also consider it a mechanical excitant, by its presence in the vagina, and the production of coagula in the cavity of the uterus, to produce contraction of that organ, and is thus a very valuable means for arresting uterine hemorrhage.

I do not deem it advisable to puncture the membranes during this period to facilitate the delivery of the embryo, as there is a strong disposition during this time for the os uteri to con-

tract upon the membranes, should they protrude, or to enclose them within, after the escape of the ovum; increasing the difficulty to their expulsion, and the uterus is too small to admit of a manual delivery.

Should the ovum have ^{escaped} leaving the secundins, with the os-uteri contracted, and the hemorrhage continuing; resort must be had to the placental hook, to bring ~~down~~ them down; which may be accomplished by carrying it up through the mouth of the uterus, and hooking it in the placenta, ^{and} by gentle traction, break up its attachments, and bring it away.

During the second period; which embraces from the fifth month, up to the full period of gestation; the same general plan is usually indicated as far the first; with the addition, that puncturing the membranes may be resorted to

with benefit, and the delivery of the child by forced means, frequently essential to the safety of the patient.

When pain occurs during this period, of a moderate character, and the hæmorrhage is slight, the exhibition of opium and the acetate of lead, may contrall, and arrest it; but the patient should be cautioned, to keep quiet, confined to an abstemious diet, together with keeping the bowels regularly open, for there is no security that it will not again return.

It is true that during the sixth month the uterus, would not admit of manual delivery, but when the mouth of the womb was open or dilatatable, the ergot, or cattan root Tea, would generally answer the purpose of causing the expulsion of the contents of the uterus, and remove the cause of the hæmorrhage. But when the os uteri was rigid and closed, the tampon should

he resorted to, and so far as necessary, the antihemorrhagic treatment, recommended for the first division, he used also. I have above spoken of the cottan coat, as a means of producing uterine contractions; I have no experience with it myself, but I have been informed by a very intelligent medical gentleman, that he has used it after with great benefit. I shall test its virtues the first opportunity I have, that indicates its use.

During this period, I have great faith in the use of the Sampan, as in the preceding, and should use it, up to the full period of gestation, in connection with ^{the} other means indicated, in all cases where the os uteri was rigid and closed, and where flooding had occurred to fainting, as perhaps the only means of attempting to arrest the hemorrhage; but when the os-tincee was dilated, I should rupture the membranes, hoping thereby to

cause the uterus to contract upon the bleeding vessels, and thus suspend the immediate flow of blood; and whether the term of gestation had ceased or not, the loss of much blood, would be very apt to bring on contractions, sufficient, to eventuate in the expulsion of the foetus; and the opening of the os uteri, would be evidence that, that period had ceased, and final delivery inevitable. And if the rupture of the membranes, does not arrest the hemorrhage, the tampon can be introduced, and should be, and if it controul the flooding, await the natural expulsion of the contents of the uterus. But should all the means fail of accomplishing their object, which will sometimes be the case, then delivery should be attempted, either by turning, the child or by instruments, if necessary, with all the at-

-tendant consequences, as the only means of se-
curing the safety of the patient.

I have thus given a hasty, but very imper-
fect sketch, of uterine hemorrhage during preg-
nancy, together with some of the causes producing
it; its effects upon the system, and the mode,
in a very general manner of treatment. I regret
that, I have not been enabled, to give the sub-
ject that consideration, its importance, as I
conceive it demanded; but such as it is, I
submit, it to the scrutiny of the Trustees
and Faculty of the Medical Department of
the University of Nashville, with some mis-
givings, and sincere regret, that it is so poor an
offering for the honours they have the power to
confer.

I hope it will not be considered out of
place for me, to here, return my thanks to the

Faculty, for the courtesy and respect, they have
each thus far, extended to me, in our intercourse,
and to congratulate them upon the success
that has attended them in building up a med-
ical school at this place, and sincerely wish
that their labours may be abundantly rewarded.

Asheville January 1st 1853.

W. N. Bicknell
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