AN
INAUGURAL DISSERTATION
ON
"Uterine Hemorrhage"

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BY
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OF
"Wanetaon Coziu"

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To
John W. Watson, M.D.
Professor of Obstetrics and the
Disease of Women and Children
In the
University of Nashville.
These pages were respectfully in-
scritted in grateful remembrance
of his talents as a teacher, and
his Kindness as a Student friend.

By the Author.
Uterine Hemorrhage

I have selected the subject of Uterine Hemorrhage upon which to write my Thesis. It is perhaps my duty to precede what I shall have to say in this form of Hemorrhage by a brief description of the Anatomy of the Uterus.

The Uterus is situated in the Cavity of the Pelvis, at the upper extremity of the Vagina, with the bladder before and the rectum behind. It is muscular in its Structure, and the Cavity is triangular and lined by a fine membrane. The Uterus is generally from 4½ to 3 inches in length, rather inclined to be pear-shaped, sometimes flattened, with its small extremity hanging in the Vagina. It is divided into the fundus, body, and neck, has three openings two leading from about that portion where a line could divide the fundus...
from the body into the Fallopian tubes; the other is at its neck.

The Fallopian tubes are connected with the uterus on either side. They are small hollow tubes four or five inches long, with the uterine extremity small, and terminating at the other extremity in an opening of some capacity, which is surrounded by an uncurl of Hill called fimbrisse.

The ovaries are situated in the folds of the lateral or broad ligaments near the abdominal extremities of the fallopian tubes, one on each side. They are two small roundish bodies about the size of an Almond or Nutmeg, and are the seat of Conception.

The Ligaments of the uterus are the posterior or Uterus-sacral, the broad and the anterior or round.

The anterior or round ligaments arise from the superior and lateral parts of the uterus, known in the doubling of the broad ligaments.
Crop over the brim of the Pelvis, through the abdominal ring and canal and lose themselves in the groins.

The broad ligaments are duplicatures of the Peritoneum, as it passes from the Uterus to the lateral portions of the pelvis, one on each side.

The posterior or Utero-Sacral Ligaments take their origin from the posterior part of the neck of the Uterus, near its middle, diverge and rise towards the middle of the lateral edges of the Sacrum and are lost in the cellular membrane covering that bone.

The Uterus is supplied with blood by the ovarian and Uterine Arteries, and with nerves from the aortic plexus and from the hypogastric nerves and plexus, being a mixture of Sacral sympathetic nerves.

Both of all the subcutaneous appendages which are highly essential, it is perhaps of the most importance to understand...
the Medium of Communication between
the Mother and her Child (The Placenta),
the organ through whose means nourish-
ment is supplied, growth perfected, and
life sustained. The placenta consist of
a somewhat flat, irregularly circular,
soft or spongy mass entirely made up
of arteries and veins with the exception
of a mixture of a pulpy or cellular
substance. Of the vessels, there are two
orders, strongly interwoven with each
other. The first is a continuation of
those from the funis, which ramify
on the internal surface of the placenta;
the arteries running over the being
which is a condition peculiar to the
placenta, and then, branching into its
substance, communicates with each
other, and divide into innumerable
small branches. The second order
proceeds from the veins, and div-
ide or ramify in a similar manner
with those of the funis. The veins of
course in their divisions accompany
the arteries as in other parts.

The Placenta,
is attached to the uterus by the intestinal
-ine of the Connecting Membrane. It
may be attached to any portion of the
inner surface of the uterus; but it
most usually placed against the
upper surface of the body, occasionally
at the very junction, most rarely towards
the neck, and still more seldom over
the mouth of the womb itself. In
which latter condition, its situation,
must necessarily give rise to a
great loss of blood, when its orifice
opens in labour.

This brings me to the direct
consideration of my subject
Uterine Hemorrhage.

Hemorrhage is when properly considered
a sound of frequent and alarming
danger to the parturient woman, when
we refer it to Common an occurrence, is so
terrible in its Character, and so destructive
in its operation, the unforeseen occurrence
Claims our special attention, since the importance of being thoroughly acquainted with the nature of such alarming accidents as the one we are about to consider, as well as the most efficient means of relief (to the painting and unfortunate female) that nature and science have placed at our command. There is no period at which hemorrhages may not happen after the first months of uterine gitation. But what I shall have to say upon this subject will be directed to hemorrhages occurring during and after delivery. This may be accidental or unavoidable.

I will first enter upon the consideration of accidental, or when the placenta is in its usual situation, but from some unknown cause is partially detached from the uterus, either before or after labour has commenced. The proportion to the danger present from hemorrhage.
The causes that may be enumerated as producing so much alarm and terror from flooding may be either exciting or remote. Instances such as falls, blows, violent shocks, &c. &c., may have the effect of a partial separation of the placenta from the uterus, thereby exposing the blood vessels and giving exit to the vital fluid. Other causes than those already enumerated, might be mentioned, as well as lifting heavy weights, excessive exercise, fatigue, strain at work. Indeed, excessive uterine placental contractions, plethoric and spasmodic action of that portion of the uterus to which the placenta is attached, symptoms.

The exciting causes may be followed immediately by a gush of blood, or it may be preceded by dull pain in the back and abdomen or by general as well as local uneasiness. If the blood should be retained, by rigor, tension, weight, in the lower part of the abdomen, faintness, &c. The discharge will
(As laugh) show itself, either with or without pain; the quantity, thus discharged, will vary from a few ounces to a sum sufficient to produce syncope. On the occurrence of syncope, the discharge ceases, but is renewed, as soon as the patient recovers from the state of fainting into which she has fallen.

As fainting spells may be repeated from one to two or three times, if the bleeding be not arrested. The skin becomes covered with a cold and clammy perspiration, coldness, constriction, pulse quick and fluttering, and most generally dark circles around the eyes.

And if the bleeding is not arrested, all of the above named symptoms will increase, with slight dimness, ringing in the ears, sighing or groaning, delirium and death. Death may be preceded by fainting or convulsions.

In this form of hemorrhage, the accipio
of labour pains will check the flow which is again renewed when the pains become very weak or cease. A great deal depends upon the period of gestation at which the hemorrhage occurs. If before the commencement of labour we institute a vaginal examination, the mouth of the uterus will seldom be found open or ever dilatable unless the hemorrhage be escaping or it has been flowing for a considerable time, then it is that it may be dilatable.

**Diagnosis**

It is not very difficult to settle in our minds the difference between this and unavoidable hemorrhage, as we are generally able to trace the accidental to some probable, if not known cause. The importance of being able to distinguish this from invariable is very great as the treatment differs materially. But as before stated we can mentally trace this to some external and exciting cause, and another means of great utility to us in forming our
Conclusions in this form is: that there
is an arrest of hemorrhage during uterine
Contractions, or labor pains. Also in the
other there is an increase of hemorrhage
during the same. With this light upon
the subject, there certainly cannot
be much danger of an error in diagnosis.

Treatment
This will depend upon the period of
gestation at which the bleeding occurs,
the state of the Os uteri, and the amount
of discharge. It is therefore certainly
necessary, if there be much hemorrhage,
to begin treatment as soon possible the state
of the month of the womb.

If the
patient has not gone her full time,
and she experiences no pain, the month
of the womb not dilated nor dilatable
we should direct, that she be placed
in the horizontal posture, upon a firm,
hard and unyielding matter, that she
keep perfectly quiet, thinly covered, the
room well ventilated, and allowed
As much ice water to drink as she desires, we may then give some acid mixture, as that of the Head, found in Churchill's Midwifery, to with Sulphuric Acid and ingredients of Raisins. Or we may give larger doses of Acetate of Lead or Opium in large doses, or small ones frequently repeated.

And as before stated, let the patient have as much cold drink as she desires, to which may be added Nitre of Tartar, and if the bowels be constipated, it is best to relieve them by injections, as the relief will be more prompt, and at the same time acquire relief eventually for their evacuation. 

If this does not put a stop to the flow, we may resort to the tampons as a certain and sure means of arresting the hemorrhage. This we cannot do with safety, or without considerable risk, after the Uterus is emptied of its contents, that is, after the birth of the child, as there would be considerable danger...
from internal hemorrhage, before delivery, there is no danger from internal hemorrhage as the cavity of the uterus is full.

On this form of hemorrhage the flow is arrested during pains or uterine contractions, as the contents of the uterus press against the placenta; thereby compressing the bleeding vessels, and putting a stop to the flow for the time being. As by contracting the vessels are made smaller, diminished in size, and in proportion to the diminution must be the degree of arrest. But when the flow is defined and the contractions weak, the patient is in imminent danger, in which case, it becomes necessary to rupture the membranes, as this will most likely produce or increase the contractions, and thereby terminate the labour more speedily. That the rupturing of the membranes are successful, we have the best Authority, as Dr. Ransfortham, Baudeloque and others.
I, in case where we are called
ed, after alarming exposure, hemorrhage,
we may succeed in delivering the patient, but
she may die from the loss sustained
before our arrival. It is in such
cases as these that transfusing is recom-
mended. I have however such little
confidence in transfusing that I think I could hardly be persuaded
in my mind, that any good would
likely result from such a course
of proceeding, and therefore believe
that I should not resort to it under
any circumstances. In these cases
if the placenta is not expelled very
soon, it is best to extract it, and I
secure a firm contraction of the
Wombs at once. As the hemorrhage
will continue until it is done, some
recommend advising in these cases
(small dose) but I would certainly
prefer the Enemoe first, in order
to produce the contractions more
effectually, after which I think the
Chinese might be given for its stimulant
effect. Frictions over the abdomen
or grasping the uterus through the
abdominal parietes are good remedies.
Cold water suddenly applied to the
abdomen is without doubt a remedy
of great utility on which I have
decided confidence. The frictions
and grasping are however generally
insufficient to excite the contractile
powers of the uterus, enough to effect
the desired end, after which the
patient should be attentively watched
and every case taken to prevent
a recurrence of hemorrhage.

Unavoidable hemorrhage
This is when the placenta, is the presenting
part or placed over the mouth of the
Uterus. It is in such cases as these
that the Contractions of the uterus
produce bleeding, and in proportion
to the Contractions will be the
amount or severity of the hemorrhage.
And it is in these cases that "hemorrhage" is increased on the occurrence of labour. This form of hemorrhage may occur at intervals, with or without pain, from one to six weeks before the term of utero-gestation expires, or labour commences.

It generally comes on very suddenly, and without any apparent cause, may do so while the patient is engaged in her usual business, or when she is perfectly at ease, or at rest. While sitting, standing, or lying in bed, indeed it may occur, while in the enjoyment of society. The first indication is very often, and I may say generally, a sudden gush of blood, and without the patient being able to assign a cause. These gushes are horribly generally arrested by the time the patient becomes sensible of the accident. It is liable to return at intervals of from 5 to 8 days from the first attack, until labour commences upon the accession of which, as before stated, the fluid is
Sensibly increased at each successive pain. The causes of hemorrhage in these cases, is evidently the separation between the placenta and the uterus, and in proportion to the separation will be the danger present. These cases almost always terminate fatally, unless manual aid be resorted to at once. As the contractions recur in frequency, the blood increases expiring or rupturing a greater no. of bleeding vessels. And this it seems that the very act that nature calls into use to relieve herself in common cases, is an aggravation in these and adds to the danger. It is therefore highly necessary to resort to other means for relief. The symptoms in these cases are very much like those already noticed only much more rapid in their progress and termination.

Diagnosis.

The sudden and apparently causal increase or recurrence of the hemorrhage increased
discharge during pain and finding
the placenta over the month of the
Uterus, are said to be the Character-
istics of this form of hemorrhage.
In Accidental Hemorrhage (as
before stated) there an arrest of the
flow during pain; in this form there
is an incrustation. It may be
thought difficult to determine whe-
ther these be a clot or portions of
the placenta presenting. To distinguish
between these, the former is yielding
and can be easily broken down
and withdrawn, while the latter is
more firm and seems to be attached
to the Uterus, which is in reality the
case, and cannot be removed without
considerable Violence.

Treatment.

If called upon to treat a case of this
nature, or when the discharge has taken
place before Labour Commences, and
where there is no pain, the Uterus not
dilated, the discharge not great.
or alarming it, we may try the palliative treatment, as recommended in accidental hemorrhage. As perfect rest in the horizontal posture, on a firm bed, thin Clothing, cool room, cold drinks, small doses of Opium, and if necessary, empty the bowels, by the administration of some gentle Cathartic.

But should the discharge be excessive, so as to threaten the life of the patient immediately, other and more prompt measures must be resorted to at once. And if this is not the case at first, it will most certainly be at the commencement of labour.

And from the very nature of the case, little hope can be indulged of a natural termination, unless the contractions be strong enough to expel the placenta, before or with the fetus, which, according to the testimony of the most experienced, is seldom even the case. We have then but two and the only two
and that is to terminate the labors or
 delivers as soon as possible. This should
 be done before the constitution is seriously
 affected, if it possible to do so. Still
 I am not by any means think it desirable
to have to introduce the hand into the
 Month of a rigid Actein: but from
 the best information, I have in perusing
 upon this subject there is but little
 danger of being so unfortunate
 as to meet with such cases. As
 the Month of the Uterus is generally
 softened by the hemorrhaps; Lege
 or by the time we may be called.
 If it is not already dilated, it is
dilatable and we may proceed at once
 to introduce the hand into the Vagina;
in the axis of the outlet. Changing,
it as soon as it gains admittance
 into that of the Brim where it comes
 in direct contact with the Month
 of the Uterus into which it is to be
 firmly but gently insinuated.
Then pass between the placenta, and
Cervix on the side most convenient (some say where the placenta is thickest) until you come in contact with the membranes which must be pierced. The feet of the Child searched for, found, and brought down. When the body of the Child gets into the pelvis, the hemorrhage will be partially arrested, as it acts as a plug or compress, thereby stopping the blood for the time being, &c. But notwithstanding, we should not delay the delivery long as there might be internal hemorrhage. If the uterus should not act vigorously and promptly, I should think it advisable to administer Ergot in decided doses, which I think would be an invaluable remedy. And I would in such cases, give the Ergot at or before the time of introducing the hand; that is, when the process of the uterus would appear to be very feeble, and
inexpedient. If the placenta be not expelled with or soon after the Child, it should be brought away by gentle traction at the Cord. At the same time we should make steady, but gentle friction over the abdomen or grasp the Uterus through the abdominal parites, in order to promote a more speedy contraction.

If these means should fail to expel the placenta, Ergot constitutes the palladium of our hopes. The after-treatment will be very near the same as in accidental hemorrhage; perfect rest both of body and mind. The patient should be carefully watched in order to prevent a recurrence of hemorrhage if possible. After delivery there is almost more or less hemorrhage but to constitute a flooding. The discharge must be expectorated or at least considerable, such as to
produces a decided impression upon the operators. This is generally
caused by a want of a contracting of the uteri.

In the treatment of
this accident, the first indication
is to cause uterine contractions
that may be done by frictions. The
application of a napkin well cat-
churled in ice water is a very hand
and often effectual means of exciting
the uterus to contraction. It should
be applied suddenly, thereby giving
the system a shock. Or it may
be given in these cases with a
happy benefit, also sugar of lead
opium, etc.

Some recommend
the introduction of the hand
of the hemorrhage does
not yield to the treatment
mentioned, thereby making
friction in and externally
as @ hand means of exciting
the Utes to Contract.

I have great confidence in the plan of treatment, but think it should probably be the last resort, as it will hardly (if ever) be necessary.

I have thouroughly gone through the subject. I conceive that I have noted all the leading facts in relation to accidents and unavoidable hemorrhage, that will serve to make it properly attended to. The medical man, of service in such states of disease and danger, as in Uteine hemorrhage, I don not however present the foregoing as containing any original ideas, but as a memorandum of the case.
Collected, from various sources, all of which are respectfully submitted by Wm. N. Pitcher.