Probably there are few incidents in the career of a General Practitioner more provocative of anxiety than the occurrence of “flooding” - one of those obstetric contingencies requiring a man to be prepared with a variety of preventive measures, presence of mind and, above all, self-reliance. For whilst in a large town he can often obtain comparatively ready help from a brother, he will, in thinly populated, isolated districts, often lack such help; and the exhausted patient may merely recover to become liable to various, immediate, asthenic diseases, or, escaping these, she may have to endure many years of misery, during which she is never free from some ailment however slight or difficult of classification.

I have one case in mind - that of a gentlewoman, by constitution singularly free from any family taint excepting GoL, and whose confinement were in no instance abnormal or subject to flooding. The surgeon who attended her on eight occasions bled her in each from the arm after delivery, and although she lived to 71 years of age, I know that from a period long antecedent to the two last labours she was always anaemic, spiritless,
spiritless, had constant headache, and a muddled digestion, was almost never free from pain, somewhere, and had scarcely ever a proper night's sleep. She consulted some of the most scientific men of the day, but all failed to understand her case, nor pronounced her complaint death - that diathesis asserting itself only long after her last confinement.

Whilst we are now taught to act very differently, I cannot help thinking that there is still room for improvement; inasmuch as, whilst some of the best surgeons of our day cannot well endure to see an ounce of blood lost unnecessarily, some midwives practitiously are, I fear, disposed to let a woman lose unnecessarily, considering it "only usual" or of "little matter." Also I think that uterine haemorrhage should often be treated more promptly and with less trials of milder measures at first, where bolder, but probably equally safe methods would almost certainly arrest the flow.

In my thesis I shall address myself more particularly to the consideration of the best means to save the vital fluid as much as possible, and to rally and conduct the patient to the highest condition of health possible after the immediate danger is over.

I have divided the treatment of uterine hemorrhage
under the headings of Ante, Inter, and Post-partum.

**Ante-Partum**

A. Early months, i.e. 1st to 6th. B. Later months.

A. The occurrence of haemorrhage in the early months refers usually to abortion, actual or probable; and it will be convenient to consider abortion as accidental or habitual. During pregnancy, there is a largely increased supply of blood to the uterine vessels, consequent on the stimulating presence of the womb, which, if healthy, is able to assimilate all at its command; and, provided there be no diseased condition of the vessels or mucous membrane of the uterus, no bleeding is likely to occur. But if, as gestation advances and the hyperemic condition increases, the uterine tissues are, from their pathological condition, unable to sustain the vessels in their condition of increased tension, there will very likely be an escape of blood during an intermenstrual period, or, if not, at one. But I think even if the uterine tissues be healthy it may sometimes happen that, under a sense of fear, fright, or other sudden emotion, haemorrhage may occur as a result of sudden increased suction of blood to the organs— or, at any rate, this accident may easily occur if there be less healthy Structures.
structures. Should the haemorrhage occur prior to the 7th or 8th month or before the coalition of the decidua vera et reflexa, the embryo is killed, and the blood, becoming extravasated between the uterus and ovum, separates them, and that part of the uterine cavity being distended, contraction is set up, and the ovum is expelled. The signs and symptoms of abortion are pain during a period after the woman has failed to menstruate for two or three successive ones, and which is usually situated in the loins and abdomen, and it may be accompanied by blood. There may cease or the haemorrhage may continue until finally the ovum be discharged. The causes of abortion are many, and, although it is frequently attended by but slight loss of blood, I may discuss them as being severally capable of producing haemorrhage.

A. Structural changes of the uterus, or its confinement by adhesions—such as parametritis, cellular pellucidity, where the organ is so bound down as to be unable for complete expansion beyond a certain point, after which the ovum is expelled—of the part affected be near the os uteri gestation may proceed to the full time, and only a tedious labor results.

β. Marriage late in life—such as a woman reaches about 40 years of age, having previously borne no children,
children, her uterus has usually little capability of
geasation, and this is often a cause of a abortion. Again, if
a woman, having borne several children, she may
conclude by aborting, or, after so failing, may, after an
interval, successfully bear another and last child.

**Semi-ossification of the Uterine fibres.**

This is very unusual, and the question intrudes
itself "How and when did this occur?" I think that
such a morbid state could never pre-exist in the
unimpregnated uterus, and that, as gestation proceeds,
the blood contained cartilaginous or osseous matter
instead of muscular fibre; or the placenta may
alone take on this abnormality.

**8. Previous Miscarriages** - the abortion frequently
leads to another. Here we have exemplified the force
of habit, the uterus having a tendency to cease gestation
at an early period after conception - a condition hard
to relieve.

**E. A general systemic debility.** - The uterus is
not only affected by the state of the blood vessels, but also by
such general conditions as amenorrhoea, amenorrhoea, and
deficient nerve force. In pregnancy a large amount of
nerve force is attracted to the uterus more or less at the expense
pre-tempore of other parts; hence there exist often a typhoid bowel,
bad digestion, leading to aching or diseased teeth.
E. Retroversio of Uterus. This condition, by limiting
the expansion of the uterus, may be a cause.

Γ. Death of the fetus - though any blood disease of
the mother, child, or from placential disease.

In dealing with a case of threatened abortion one
should enquire if it could not be arrested, and should
hope it might, in the absence of the embryos or any of the
membranes amongst the discharges; and, if on examination
per vaginam, I could not ascertain that the os was dilating,
and if there were no decided expulsive pains, I would hope
by enjoining rest and the use of opium, to procure that
gestation should advance. Failing in this trial of
treatment, and if the bleeding were very active, I should
endeavour to empty the uterus by introducing one or more
fingers into the os and clearing it out. If the womb
were attached to the fundus and not low enough for
my fingers to reach as far, I would employ chloroform,
and very carefully introduce one hand into the vagina,
with the other steadying the fundus externally, and with
my fingers scoop out the contents of the uterus as much
as possible. Should there remain any portion of membranes,
they would probably come away in the course of three or
four days, although we hear of cases where slight uterine
contraction causes their retention, and the narrowing of
the cervix may require to be overcome by preferably a
sponge.
Tentle tent, which serves at the same time to control the haemorrhage by pressure on the vessels. Cold applied to the fundus and vagina together with ergot or turpentine powder would assist. In some cases of occasionally repeated haemorrhage within a few days after abortion, where I have found rest, opium, and avoidance of stimulants to insufficient to obviate the flow, which however has been rather persistent than alarming, I have introduced a large sized speculum (ferguson's), and having impinged upon the os, have then introduced a piece of lint enclosing a ball of carbolized tow, which, on withdrawal of the speculum, remains pressing upon the os and cervix, causing formation of a blood clot and cessation of the flow. This remains within twelve hours, watching meanwhile for any rise in temperature or small pulse indicating internal bleeding or other adverse constitutional symptoms; thereafter washing out the vagina with Cundy's fluid.

But if, as rarely happens, the haemorrhage do not cease, what is to be done? In his lectures on "Osteotroic Operations" (1811, p. 394) James recommends the application by a sponge of the strong liquor ferri perchloridi in the proportion of 1 to 3, or else to inject this preparation slowly. Many obstetricians fear to do this lest a portion of the mixture escape into the peritoneal cavity through the Fallopians.
Fallopian tubes; or else they fear thrombosis.

Now as to the first, excepting in a few very rare instances discovered after death, the tubal walls are so closely applied as to make the fluid's passage along them most difficult, even if possible; and if the tube be carried into the uterus by the hand, an easy mode of effect for the solution is obtained and the danger is then minimised. As to the second, were the solution strong enough it would plug the patent uterine vessels mouths by blood coagula, thereby preserving the circulation from septicemic infection, and simul-
taneously arresting haemorrhage. The severely antiseptic solution would congregate the mucous membrane, and so compress the vessels' mouths; moreover I think it highly probable that the muscular fibres would sympathetically contract. I have certainly never applied this remedy, never having been so driven to a last resource, but only if there be good reason to doubt the propriety of applying the strong staircase, I would not hesitate to avail of it, failing otherwise, preferring that the woman should run whatever risk attached itself to such treatment than die for want of it or make, at best, an extremely bad recovery.

...endeavouring to obviate miscarriage in an habitual one has to consider the causal nature
If plethoric, as indicated by full habit and copious menstruation, let the patient abstain largely from meat, preferring a vegetable diet; from the luxurious feather-bed, substituting a firm mattress; and from late hours. Keep the bowels open by a purgative or other purgative spring waters—e.g., Friderichshall—and enjoy regular and increasing exercise in bracing air and pleasant country. If conception has not occurred, I would recommend a cold bath, preferably a salt one; and the injection, daily, of cold water into the vagina would give tone to the neighbouring parts. The patient should be induced, if possible, to sleep apart from her husband, so as to allow of these measures having effect before conception take place; and after that event sexual intercourse should equally be avoided. If on the contrary the woman be weakly and anemic I recommend a sufficiency of meat and fish, a daily glass or two of sherry, a mixture, say, of tincture of yellow bark ʒ with dilute nitric acid ʐ, and an occasional laconic to prevent local congestions. During pregnancy one or more of the various organs are frequently out of order, and it is not well to neglect them. For instance if the stomach be irritable a mustard blistor would relieve and small doses of Citrate of Iron or alumine would do good, and
and, so with any other organ or system. If there be
by phthisie taint the mother ought to be treated, and as
the child would participate, so the uterus and placenta
would be kept healthier. If abortion threaten, as
evidenced by pain and more or less haemorrhage,
I always insist immediately upon absolute rest
and employ Antimony (vacular depressant) so as to
arrest bleeding and consequent uterine action.

M. A. D., age 33, wife of a picture dealer
(her second husband) was, whilst yet a widow, dis-
charged from a hospital of woman's diseases as incurable,
having very severe retroflexion, so Ernas informed.

After her second marriage she became pregnant,
and I was sent for hurriedly as blood flowed, and
she was satisfied that she was as much as she had
done four years previously. Finding no portion of
the ovars or membranous protruding, nor dilatation
of the os going on, gave two grains of Opium at once,
insisted on rest, seeing it carried out for a week, and
attended to the stomach, bowels, and other systems,
notably giving antihateriaic medicines as she had
the lishie diathesis. The mischief was averted, she went
the full time, bore a healthy child, and had a
normal labour.

After cessation of the haemorrhage, there should
be
be enjoined great quiet, physical and mental, for some weeks, and all vascular excitement is specially to be avoided. Milks should be substituted for all stimulants, and little animal food taken. Leucorrhoea of bowel must be abated by cooling laxatives, thus keeping the uterine sinuses from engorgement.

B. Later Months.
As pregnancy advances, one of the most serious conditions leading to haemorrhage is the implantation, partial or complete, of the placenta over the os, i.e. Placenta praevia, and, if there is a separation of the attachments between the placenta and cervix, haemorrhage results. The causes of placenta praevia have been the subject of considerable controversy between some of the leading obstetricians in the past, and Sir James Simpson has differed from many of his contemporaries in opinion. Rawlin's ("Dissertation on Obstetric Forsps", 1793) said the haemorrhage came from the placenta whenever detached: Trevor, Professors Hamilton, Sir J. Simpson, Radford, and Wood agreed, but did not all draw the same conclusions therefrom.

It is impossible, I think, for an unprejudiced mind to consider Sir James' truly scientific arguments
arguments and deductions from numerous cases without joining issue with him. Certainly, having implicit faith in the remarkable honesty of his statistical and reported cases, I have never hesitated to adopt his views, which are based upon the truest principles of physiology; and, having got so far, it is by easy transition that I accord with the late Professor's modes of treatment.

The condition is to be recognised by the index finger coming upon the fibrous masses, by the absence of any history of accident, and by the fact of the flow being increased by the pain. In cases of only slight detachment the existence of the latter fact goes to prove to my mind not only that the flow does not proceed from the uterus but from the placenta, since by the closing of the uterine arteries where detached, the vessels do horns can contract, and the vasa whose placental attachment remains serve to conduct the blood to the placenta, whose returning veins, having lost their uterine connection, pour out their blood into the cervical cavity — which condition is increased by the contractile uterine pressure on the placental mass squeezing out the contained blood. This fact being established the only reasonable treatment can be to artificially detach the remainder.
remainder of the placenta and remove it, when the haemorrhage invariably ceases. Then, if the head present, the labour may be terminated by uterine contraction; or, if as often happens, there be malpresentation, turning may have to be resorted to, and if the child be dead, there is no need for hurry in the birth. The child's life is not necessarily lost, whilst if the method of delivery recommended by Sir James' opponents be adopted, not only is bleeding going on, endangering the child's life, but the operation of turning - always mere or less dangerous to the mother - is rendered increasingly so by the high probability of lacerating the cervix and causing fatal bleeding in consequence of its extraordinary hyperaemic condition in Placenta Praevia.

Evaluation of the liquor amnini, preferably pursued only in "partial" cases, often fails to mitigate the flow, and if painless is to be lost in detaching the placenta. If the liquor will not be required if detachment of the placenta be the treatment in view, should bleeding not be arrested by the milder measures, there can be no objection to its evacuation. It is a plan which I should certainly pursue, convinced as I am of the very great superiority of treatment by placental detachment over that by turning. Should the placenta fully present I would puncture by a trocar, catheter or other instrument, endeavoring...
—endeavouring to lacerate the mass as little as possible, so as not to allow the great placental capillaries being "tapped" more than could be helped.

Still, turning must sometimes be resorted to:

(a) in malpresentation
(b) when the child is alive
(c) where intra- gestation has prolonged to full term or nearly so, and the os is not dilated or dilatable at the time of the haemorrhage as to allow of the surgeon’s hands being introduced for the operation with safety to the cervical structure.

**Summary**

(1) When the os and pelvic passages are sufficiently dilated to allow of the operation without injury to the mother.
(2) When the child is viable, presenting abnormally, and gestation has gone to full term.
(3) When the membranes have not been ruptured (prefer the bipolar method).
(4) In cases of multiparae, on account of usually more dilatable os.
(5) Where detachment of the placenta is insufficient for the welfare of the mother, owing to convulsions etc.

**Evacuate**
Evacuate liquor amnii.

1. Where haemorrhage is not yet severe, and where the placenta only partially presents.
2. Where haemorrhage is severe and the uterus small and rigid.
3. Where the liquor amnii is excessive.

Detach and remove the placenta.

1. When the haemorrhage is greatly exhausting to the mother and partial separation of the stretched portions of the mass does not suffice to arrest the flow.
2. When turning would seriously endanger the mother's life, and when the infant is premature, non-viable, or dead.
3. When the os and passages are not sufficiently dilated for version from whatever cause - e.g. Rickets, premature labour.
4. In most cases of primiparous where the os internum is hard of dilatation.
5. Where gestation has proceeded only to the 7th month.
6. In cases where the uterus is not very.

Accidental Haemorrhage

At any time during pregnancy, and let the cause have been caused at whatever part of the mucous membrane of the uterus, haemorrhage may occur in consequence of detachment of the placenta, whereby the utero-placental vessels are opened.

The separation is induced by

1. Violent exercise or shock, e.g. vomiting, stooping, straining,
as at blood or heavy lifting, working a modern sewing
machine, extraction of a tooth—causing contractions and
subsequent abortion. Barnes ('Remarks on Obstetric operations'
Nov., 1871, p. 427) says colitis may even cause it which
I quite believe, as is exemplified in the following case:

I was summoned on 3 Oct., 1876, to attend Mrs. G.,
a French woman, aged 36, and in the 6th month of
pregnancy, who complained of 'flooding' and bearing
down pains. On examination I found the os somewhat
rigid, but in the course of an hour, the pains became
more severe, there was increasing relaxation, and an hour later
a dead fetus was expelled, speedily followed by the placenta.

On diligent enquiry as to the cause of the miscarriage, I
ascertained that colitis had been excessive and chronic, and
that she had distinctly felt pain and sickness on one occasion
and had, herself, no difficulty in ascribing the abortion to
that cause. In these cases I consider that nerve-nutrition
is deflected from the uterus and ovaries, and if gestation
cease through the loss, contraction begins. Prostitutes
seldom conceive, or, if so, still more seldom carry the
child to full term in consequence of the enfeeblement and
nerve-exhaustion inseparable from their occupation.

(3) Sudden (more or less) rush of blood to the uterus
through fear, fright, or any sudden strong sensation by
paralysis of the sympathetic nerves and consequent relaxation
of the arterial walls, allows of an increased supply of blood being directed to the uterus, and exudation occurs in the uterine placental vessels, thus separating the maternal and fetal structures.

Ineffective contractions serving to separate the uterine from the placenta variously caused. In proportion as the uterine fibres develop, the organ more and more rapidly responds to an amount of irritation which at one time would have caused little or no disturbance, but which, as time advances, sets up contractions, and so procures separation of the placenta from the uterine. However, little extravasation of blood takes place between the two structures it may serve to arouse further contractions resulting in further loss. Again, the uterine presents the presence of a placenta diseased from any source, and James ("Fatty Degeneration of Placenta" Med. Chirurg. Trans. 1857-3) affirms that a morbid placenta has difficulty in adapting itself to the uterine surface and in accommodating itself to the movements; also, if the fetus die, that there is destruction of allied tissues, which become loosed from uterine attachments. With this I fully agree. It degraded, but especially a poisoned condition of the blood may cause haemorrhage and detachment, as for instance "Reces ophthama" (Pattison "Edin. Med. Journal" 1870) Acute atrophy of liver and Albuminuria.
Albumenuria.—The condition is to be recognised by the woman's complaints of severe pain in the uterus; but if, as sometimes happens, extravasation have proceeded and continued until the uterus has expanded, whilst no blood has escaped externally, this may escape notice until our attention be attracted by the evidences of faintness, blindness, clammy skin, almost utter want of pulse, and other signs of collapse.

My aim in treating accidental haemorrhage, when convinced of the impossibility of gestation being continued, would aim at reducing the tension of the uterine fibres to enable them to act at the greatest advantage in contracting—and to this end I would rupture the membranes. Patience and watching on the surgeon's part will often suffice to conduct the labour to a termination safe to the woman.

In most cases I would withhold ergot, as I have found prostration rather increased by it sometimes, and there is often not energy enough left in the uterus to enable it to respond to the call. Stimulation by warmth, friction and sometimes by alcohol is often necessary. But if, in spite of all, no contraction ensue, dilatation of the cervix by water bags enables the forceps to be used in head-presentations, or allows of version. Should haemorrhage continue.
or increase after delivery, I consider that the least risk would be incurred by injecting the liquor tertiarium perchloridum foetidum in the proportion of 1 to 3 or 1 to 4.

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**Post Partum Haemorrhage**

Under this heading I propose to place haemorrhage occurring during and after labour; and advantage will, I think, accrue from the following division.

A. Cases in which there is retention of the placenta.

B. Cases in which bleeding ensues upon the removal or takes place thereafter.

C. Cases in which bleeding continues or comes on, for the first time, some days after parturition, i.e., what I will call Deferred Postpartum Haemorrhage.

**A. Retention is variously caused** - If the placenta be attached partially within the cervical zone, the cervical portion is less easily detached than the remainder, in that contraction takes place more tardily in the cervical zone than in the other and safer or safe areas.

Other causes of retention there are; e.g., uterine inertia, following upon tedious labour however caused, morbid adhesions between the uterine and placenta; peritoneal adhesions (Gracey and Simitt, *Obstetric Trans.*, vol. xi, p. 108) preventing regular uterine contraction; irregular contractions of portions of the organ even when...
when free of peritoneal and placental adhesions.

Haemorrhage may arise then from any of these causes, and even from the placenta remaining loose in the cavity, even though wholly detached.

B Haemorrhage after conclusion of the 3rd stage of labour proceeds from the patency of the uterine vessels on the "placental site," and lacerations of the cervix and other parts of the uterine uterine following a hard labour; from preexisting or pre-existing diseases, e.g., metritis; from irregular as well as very slight contractions, twin births, previous placental adhesions, or the haemorrhagic diathesis.

The flow may be entirely internal, or, if external, may occur slowly but persistently, or it may be by a sort of "pump action resulting from alternate relaxation and contraction leading to collapse; and it commonly shows itself within an hour after completion of the first stage.

C Delayed Postpartum Haemorrhage will rarely occur if the accoucheur have exercised good care in the latter stages of labour, but when it occurs its causes are

A trial

(1) A hypertrophied or ulcerated condition of the Cervix.
(2) Laceration of the Cervix, vagina, or perineum.
(3) The uterine may not have been cleared of all its contents, or clots may be there still.
(4) Thrombus of vulva or vagina.
(5) Injuries (uterine) preventing efficient contraction.
(6) Retropulsion or inversion.

Constitutional, influencing the patient through the sympathetic and vascular system.
(1) Bright's Addisons (renal) diseases.
(2) The sensations of fear or disappointment.
(3) Cardiac by peritonitis.
(4) Broken down nervous system and general malnutrition.
(5) Imprisoned condition of blood as in Leucorrhoea.

Treatment of A Case.

Remove the placenta and membranes firstly, though Hume and Bonham failed to natural efforts even for hours. For my own part, I have long made a point of inducing the third to follow quickly upon the second stage by pressing the bendest first joints of the fingers of my right hand just above the fundus, the woman still lying in the usual obstetric position, and then pressing backwards and downwards until as mostly happens, the placenta is discharged entire through the vulva or more rarely into the vagina only. I rarely find it pain the patient, the pressure being gently graduated; but if there be much tenderness I renew the effort at short intervals, never, if I can help it, removing my hand from the fundus until it is
is cleared of its contents. Once the placenta has reached the vagina it should be removed by the fingers. By applying the binder quickly and firmly with the addition of a suprapubic pad, there should be, ordinarily, small chance of haemorrhage, excepting where concealed laceration or abrasion have occurred during the second stage. If there be unequal contractions, which, while they retain the placenta, do not pass off, or, if there be firm or morbid adhesion of the placenta I believe it is best carefully and slowly to pass a hand into the vagina and two fingers if sufficient, into the uterus, the other hand sustaining the fundus externally, and as thoroughly as possible remove the contents of the uterus have not power to expel them and the hand together. In cases of severe morbid adhesion, I think it better to be satisfied with getting away such portions as can easily be, lest the uterus be injured. If haemorrhage results from not easily removable placental portions, slow injection may be required. Mr. Tyson (Brit. Med. Joumal, Oct. 12, 1875, p. 550) used the strong liquor in proportions of 1 to 10 successfully.

If there be unusual spasms or irregular contractions before completion of the third stage, Chloroform or Opium would tend to relieve, and after completion they usually cease of themselves. This spasm is often caused, I think, by tearing the tired uteri by pulling at the cord, a practice I see no good in; though in premature labour,
the placenta is attached near the cervical (and least contractile) zone I have found it less easy to induce the third stage by external manipulation only; here I have usually now succeeded by combining with it traction by the cord. Molon ("Annali universali di medicina," 1826) proposed injecting cold water into the umbilical vein to excite uterine contraction. I opinion that if any good came of it, equal results might be expected from cold applications to the womb.

Peritoneal Adhesions. Sometimes during pregnancy the woman suffers from peritonitis, and the inflammatory adhesions resulting, consisting of a number of fibrinous bands or strings, more or less elastic, draw up the uterus after the birth, and frustrate the natural contractile efforts, and cause haemorrhage.

Here the left hand should be introduced to stimulate the organ, and the right hand should be applied to pushing down the fundus, and to freeing the adhesions as much as possible.

Treatment of B Cases. In order to exclude the open mouth of the uterine vessels we should seek to procure the utmost contraction, which of itself suffices. Should bleeding go on, as painness ensues, the blood tends to coagulate, and as a woman may be seen though frustrated. It is best to have the woman reclining
reclining, so as to be better subject to our manipulation, and we can better observe her face: and it is well to pass a catheter early, so that the bladder may not, by even moderate distention, be a source of distress.

Should there be a fair amount of venous force left, give Ergot and apply cold to the abdomen, and inject cold water into the uterine, but only if the organs can respond.

It is a good thing to compress the breast with the hand, or equally good to imitate the sucking action of the child by placing a thumb and finger, one on each side of the nipple outside the areolar circle, and then drawing them forward—repeating the action frequently. Another resource is to put the patient's hands into ice cold water, or to inject the same into the uterine or peritoneum, or for the surgeon to plunge his own hands in it and alternately to place a hand thus chilled on the abdomen, and to grasp the uterine with it. Pasteur ("Chirurgie," vol. 3, p. 230) advises the injection of alcohol, and I think the plan reasonable as I certainly have had excellent contraction from giving half an ounce of brandy per os, followed by iced water. Again, one might give a draught of Ergot followed by a draught made up of two or three draughts of oil of turpentine beaten up with the yolks of eggs. St. Philippe ("Gazette Medicale de Bordeaux"

Jan.
Jan. 1878) successfully treated an excessive haemorrhage as follows: having given ergot without result, he injected ergotin, dissolved in water and glycerine, subcutaneously at the arm, and within a minute uterine contraction occurred and haemorrhage ceased.

*(Chantreuil (Journal de Therapeutique) Feb. 25, 1878)*

Injected, at short intervals, 4 syringeful of Ergotin dissolved in distilled water, and in half an hour the uterus contracted and remained so for eight hours.

I think that in many cases, where the ordinary dose of the liquid extract of Ergot (3/10 2 3/10) fails, that success would result from subcutaneous injection of Ergotin as it contains a larger amount of the drug's active principle than the above named extract. Chantreuil, in extreme cases of haemorrhage, where transfusion was imperative, injected ether and brandy successfully, regarding it as efficacious as the most serious operation more available.

There ought to be easily assimilable food ready for frequent oral or rectal administration afterwards, or the success would be only temporary. Midwives sometimes call one in to their 'patients' who bleed freely, resulting from alcohol given during labour. Here uterine paralysis is present and must be cleaned out the uterus, and give diffusing stimulants. It is well also to elevate the foot of the bed and to lessen the amount of bolting of head and shoulders.
Hot water has been recently used, but I do not understand upon what physiological principle; if I used it I would be ready with iced every cold water to rapidly succeed it.

Dr. Sthill (obstetrical Society, 1877) says it acts by stimulation, and should be 7110°. Mr. Jones (Brit. med. journal, 9 Nov. 1878 p. 690) determined on testing Dr. Sthill's method, and found it to succeed admirably in a severe case. Probably the patient being much higher in temperature than the uterus acts by shock, but practitioners have told me that they failed with it, but did not use cold water afterwards—perhaps they should have done when they might have succeeded. Other methods there are.

If the case be very pressing and the accumulation of clots be suspected, introduce a hand, previously cleansed and dipped in some disinfecting fluid, into the uterus in order to clear out the contents, and then by compression, friction, and grasping by means of the other hand, the organ will probably Contract. If unsuccessful in this, compress the abdominal Aorta as a temporary remedy. Failing in this should not hesitate to inject a 1 to 3 solution of the strong per-chloride of iron. Should this not suffice, transfuse as hereafter described. Opium in small doses, but recurring doses would gently stimulate and allay excitement accompanying exhaustion. Then as to diet. I think, for preferable to brandy, in that it supplies easily assimilar nourishment.
Nourishment and support without exciting, whilst brandy is of questionable benefit for the following reasons. (a) By paralysing the inhibitory nerve of the heart, increased action ensues. (b) By paralysing the sympathetic nerve supply to the muscular coats of the arteries, their calibre is increased. (c) After the primary excitement and pruritus caused by its use are over, there speedily ensues a secondary condition of collapse and coldness, which does not occur after the use of milk. Should the woman survive after so narrow an escape, great and persistent care will long be needed. Iron, phos-phones, quinine with mineral acids; most careful dietetics; sexual rest, all will be needed to restore the maternal system.

Electricity

is a reliable and speedy mode of stopping haemorrhage; and it is strange that its therapeutic effects have been so little relied upon or availed of as has been the case. The muscle of the uterus responds readily to paralysing or the interrupted voltaic current, but it is necessary that the conductors be directly and properly applied to the organ and that the current be powerful enough.

Assume a case of post-partum haemorrhage, with flaccid uterus and relaxed p.s., with no time to spare.

The surgeon should introduce his right hand into the uterus, and hold in his left the moistened sponge attached to one of the conductors of his instrument. An assistant must hold
hold the conductor from the other pole and apply the well
moistened sponge to the abdominal parietes just over the
position of the surgeon's hand; and afterwards apply it to
the lumbar and sacral regions. Here we have the current
passing by one pole through the surgeon's body to the internal
and by the other pole to the external uterine wall. There are
other modes also, but probably this is as effectual as any,
and as easily and rapidly applied.

Transfusion

This operation is one perhaps little more relied upon
in Britain than in Electricity, partly from the fact
that few obstetricians are thoroughly acquainted with
its applications, which requires considerable skill and care.

Controversy has taken place at various times as to the fluid
to be used; and, whilst I should prefer human blood, it
would seem that a skilful injector is not wholly dependent
upon obtaining it for resuscitating a woman in anticoagulo
mortis. The great desideratum is fluid bulk to serve the
heart as a "point d'appui," and as the various vascular
cavities of the body retain some blood, this diluted with
an extraneous watery fluid will suffice to keep the patient
alive until more nutritive measures can be adopted.

Provided with a healthy volunteer as a haemic
reservoir and a suitable instrument—E.g. Russell or
Aveling's—a stream of blood flows from the median
cephalic,
cephalic, radial, or other vein of the volunteer into
the injecting ball, and thence into any large vein of
the woman’s arm until from ten to twenty ounces of
blood have been injected — some have recommended
that the blood be allowed to retain its fibrin, others,
amongst them Dr. Robert M. Donnell of Dublin, prefer
de-fibrinated blood, regarding the presence of the red
corpuscles as alone necessary; and moreover they
regard the fibrin as a disintegrative product of
the body, and liable to produce infarction of
the lung. These objections to the introduction of fibrin
consider sound and real. Dr. Royse of Middlesex, Corfb, some
sixteen years since, and more recently Dr. Hessow — advised
application of Esmechis bandage from the toes upwards
above the trunk, so as to increase the volume of blood at the
heart’s command and for the nourishment and the dispersal of
the pectoral and abdominal organs. This has been styled
autotransfusion, and would afford a substitute for the other.

Treatment of Cases.

A (1) These conditions are detectable by the finger or eye,
and are best combated by soaking with sulphate of zinc
or bichlorid of mercury rather than applying nitrate of silver
on every third day.

A (2) Sometimes we are at a loss to account for florid
bleeding occurring some days after delivery, the uterine
being
being contracted and nearly of normal size as shown by the sound, the labour having been easy and pain having been taken with the patient during and after it. On digital exam., there may be discovered a lesion of the cervix, or the speculum may reveal a laceration or abrasion of the part. This serves for a reliable diagnosis, and as to treatment, I would take the cervix with the strong perchloride of iron and pruss. (1 to 3) through the speculum, and finally plug the cervix with lint-dipped in the gauze. Laceration of the vagina and perineum are more frequent occurrences. Respecting the first, I would plug the tear with lint dipped in the above solution, and in the case of the perineum, I consider it far the best to stitch with silver wire, introducing the needle a good quarter inch back from each lip, and carrying it through the deep structures. I have seen cases heal fairly by simply bandaging the thighs together, but the vagina and uterus do not, I am sure, regain their important support so fully as if there had been careful stitching.

(3) It happens sometimes that in spite of all care, mostly from a rigid cervix that the placenta is retained, causing haemorrhage within 25 or 30 hours after labour; and if only a portion of placenta be retained in uterus, then will likely be an offensive discharge as well as haemorrhage. Here the remedy obviously consists in clearing
clearing the cavity, but if peritonaea or other morbid states have supervened, rendering the abdomen and generative organs exquisitely tender, the passage even of a finger may be attended with great pain. As a preliminary measure I would here introduce the sound, and if the measurement proved to be 4 inches or more I should assume the presence of abnormal contents, in which case, or if any fluid issued from the os, I would give chloroform and introduce my fingers or even my hand, if my digit ascertained the presence of a large portion of placenta.

In one or two similar cases I have found it impossible (at any rate without the aid of chloroform) to pass my hand, in consequence of a rigid curvus, but fortunately the cases ended well without any interference beyond disinfecting injections, the retained placenta subsequently coming away; but it is better to introduce into the os a bundle of three or four Tangle tents, and when they have done their work, to replace them, if needed, by an elastic water or air bag; which, on distension, would obtain room for the passage of four fingers and eventually the hand. Now with one hand internally and the other on the abdomen, I should expect to withdraw the offensive mass. After this the injection of Cond’s fluid, chlorine water, or Carbolic Acid solution is most likely to obviate any blood poisoning or febrile mischief.

Some authors, and amongst them Burns (Practical

observe)
Observations on uterine haemorrhage (end. 1807) advise plugging the vagina, with the view of obtaining clot formation at the vessels' mouths, whereby bleeding may be checked, and uterine constriction induced. I have alluded to this on page 7 and would reserve this mode for cases where no suspicion of septic mischief existed.

In (4) the vulva being especially liable to a collection of blood on account of its free supply of vessels and their frequent anastomosis; and during pregnancy, there being a stagnant condition of the part, rupture leading to thrombus is not infrequent either from pressure of the head in parturition or previously in the later months from a blow. But the tumour usually becomes established subsequent to the birth, and the result may be bursting of the thrombus, leading to dangerous haemorrhage or mortification.

To treat this condition I would use compression and dry cold, as by broken ice in a gutta percha bag, in the hope of resolution or lessening the bulk, especially if parturition have not occurred. But if the tumour should burst and serious bleeding occur with labour imminent, the presentation being cephalic, it would probably be wisest and safest immediately to endeavour to procure instrumental delivery. After this, bleeding may be arrested by free incision and clearing the cavity of clots, and then plugging it by lint soaked in iron solution. When the bleeding has been arrested
arrested, substitute a dressing of carbolic acid for the
last mentioned, in the hope of obviating blood-poisoning.
It is however only in severe or otherwise intractable
cases that incision and subsequent as described
measures would be required.

A (5) If a fibroid tumour exist within the
muscular uterine wall, it is sometimes a serious
complication, for it may have been abraded during
delivery, and having probably acquired increased size
and blood supply during pregnancy, it may become
a source of dangerous haemorrhage. This is not the
time for employing enucleation, for towards the tumour,
Temporarily, as a part of the organ on account of its
increased vitality and size. To avert bleeding in this
condition, I would apply the brown stoppice, for if we can
not obtain contraction, we must thus plug the
patent vessels. If instead of a mural tumour a
polypus were found projecting into the cavity, if not
very large and vascular it should be removed.

A (6) The treatment of haemorrhage occurring with
incision, subsequent to replacement, would be best
met by the application of brown solution, failing con-
traction. On the same principle, if retrogression
occur, replace the uterus by a Hodges pessary, and
any serious bleeding may be controlled by the stoppice.
Into the treatment of the constitutional causes of deferred haemorrhage I need not enter, as it belongs to the domain of practice of medicine. Of course the indication is to lessen the influence of such causes.

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