INAUGURAL DISSERTATION,
ON
Hæmorrhagia Uterina
SUBMITTED TO THE
PRESIDENT, BOARD OF TRUSTEES, AND MEDICAL FACULTY
OF THE
University of Nashville,
FOR THE DEGREE OF
DOCTOR OF MEDICINE.

BY
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OF
Alabama

March 1857

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To
John M. Watson, M.D.,
Professor of Obstetrics and the
Diseases of Women and Children,
in the University of Nashville,
This humble dissertation
is most respectfully
dedicated,
By
The Author.
Hemorrhagia Uterina.

Ordinarily, during the course of gestation and parturition, nothing occurs demanding the active interference of art. But there are numerous deviations from the ordinary course of pregnancy and the expulsion of the contents of the uterus, which do necessarily require the intervention of medical skill. Among these various occurrences of dystocia, which so gravely complicate the natural process of gestation and labour, none are more replete with interest and importance, or more richly deserve the strict attention and thorough investigation of the student of
Medicine, than Uterine hemorrhage.
The imminent danger to which it subjects the sufferer, the suddenness of its attack, the rapidity of its progress, and the often insidious and concealed manner of its occurrence, all conspire to render it one of the most formidable accidents incident to puerperal women, whether manifested before, during, or after parturition, almost inevitably compromising the life of the child at the former period, and always endangering that of another at whatever stage developed.
Under these perilous circumstances, where prompt and efficient action is indispensably necessary, the
urgent appeals of a devoted husband
and affectionate children—to save a
loving wife and mother—when made
to him, who, from a want of professional
attainments, is inadequate to the emer-
gency, will prove a withering blast,
and cause him to bemoan in tears
of blood. The futility which urged
him thus to sport with human life,
but if made to him, who is ready
and competent, to promptly rescue
her from impending danger and
restore her to the bosoms of lament-
ing kindred, will prove a source of the
greatest pleasure and satisfaction,
and leave within "a peace above all
earthly dignities, a still and quiet con-
science." These considerations ought
to be sufficient to actuate the
dullest mind and most
unfeeling heart to a just esti-
mate of the nature and extent
of the fearful responsibilities
devolving upon practitioners of
obstetrics, and to induce every one
to familiarize himself with the
indications presented in the
formidable occurrence of uterine
hemorrhage, and the appropriate
remedies to combat them.

We design considering uter-
ine hemorrhage attendant upon
gestation, during, and after par-
turbation. And first it is nec-
essary to review the causes that
operate in producing this hemorrhage.
These very naturally resolve themselves into the predisposing exciting or determining and special causes. Numerous circumstances might be enumerated, as predisposing this organ to hemorrhagic accidents, such as a sanguineous temperament, a general phthisic condition of the system, that nervous susceptibility and delicacy of sensation, peculiar to pregnant females, the extreme liability of this viscus from the considerable influx of blood which conception determines to it, and the pathological and physiological changes that gestation impresses upon it, to become the seat of all disorders of the general system,
The influence of habit in determining a greater congestion of the gestatory organ at the period of return of the catamenia; the presence of any adventitious growths within the cavity of the uterus, the process of vascular organization constantly going on in the uterine parietes, in which the calibre of the vessels is greatly augmented, and consequently the thickness and resistance of their walls proportionately diminished, rendering their rupture more easily effected by the action of an exciting cause.

The determining or exciting causes co-operating with this predisposition are almost inevitably
followed by flooding, whereas in its absence, the most violent shocks, moral and physical, may be borne with impunity. Hence those causes denominated, determining, excite or bring into play the predisposing causes.

Any vivid moral impressions, or any violent physical commotions, such as, frights falls, slouch, fatigue, over-exertion &c, act as exciting causes in producing arterial hemorrhage, and either upon the principle of inducing a sufficient congestion to rupture the enfeebled walls of the artero-placental vessels, or of exciting uterine contractions, which
break up the adhesion between the womb and placenta and expose the mouths of torn vessels.

Of the special causes of uterine hemorrhage, placenta previa, or the implantation of the placenta over the cervix uteri, is of the most frequent occurrence and of the greatest importance. Hemorrhage is so nearly an inevitable consequence of this abnormal insertion of the placenta, that it has been denominated "unavoidable hemorrhage." Indeed such a combination of circumstances as would prevent its invasion is certainly a mere accident of exceeding rare occurrences. Concerning the
cause of this hemorrhage occurring especially in the latter months of gestation, there has been considerable controversy. Most obstetricians however are agreed in attributing it to the modifications occasioned by pregnancy in the disposition of the neck of the uterus during the latter months. That during the early months of gestation the cervix is developed at the expense of the fibres of the fundus and body, but that during the latter months the cervix contributes its share to the general enlargement, and that the placenta being immovably implanted...
over it cannot follow the spreading out of the neck, and hence the bonds of union contracted between the placenta and womb become broken down, the utero-placental vessels ruptured, and hemorrhage ensues."

There has also prevailed great discrepancy of opinion concerning the anatomical source of hemorrhage in cases of partial separation of the placenta or what has received the name of "accidental hemorrhage" from the fact that it does not necessarily result when the placenta is inserted on the fundus or body of the organ. Some authorities affirm that it
proceed principally or wholly from the uterine surface; others contend that it is principally or wholly placental, whilst a third class entertain the opinion that it is both uterine and placental hemorrhage. The blood escaping partly from the uterine and partly from the detached placental surface. Reasoning from analogy, we would be driven to the conclusion, from the experiments of Mackenzie, Marshall, and others, on the bitch at the full term of utero-gestation, made for the express purpose of elucidating this point.
That it is principally or wholly from the uterine surface, and that the blood, from its possessing the bright vermillion tint characteristic of arterial blood, is rather arterial than venous blood, they were fortunately enabled to confirm what analogy taught, by experiments on the human uterus, which lead to the same results as those made upon the bitch. They found that on separating the placenta from its attachment, blood of a bright scarlet hue escaped from the denuded uterine surface, while none, or to a very trivial extent, flowed from the placental.
This view of the source and character of the blood in accidental hemorrhage, would seem to be further corroborated by the generally accepted axiom in obstetrics, "that contraction of the uterine fibres, is the essential means of arresting uterine hemorrhage," for the contractions of the uterus would exert little or no influence upon the fetal surface of the placenta. Hemorrhage is peculiar to no particular period of gestation, occurring as it does at all stages, after the decidua and chorion have contracted a union between the ovum and
uterus, which connection, when
separated, will necessarily be fol-
lowed by a discharge to a greater
or less extent. But although the
uterus is liable to this accident
at any time during pregnancy,
yet it is more frequently atten-
dant upon the latter months and,
especially during and subsequent
to delivery.
Ordinarily there are some gener-
al symptoms manifested during
the few days preceding the accident,
which prelude the occurrence of
uterine hemorrhage, such as a
general uneasiness, a heavy sensa-
tion, and partial numbness and
insensibility in the pelvic region,
dull, aching pain in the thighs and loins and not unfrequently a constant desire to urinate. When these precursory phenomena, which are characteristic of uterine congestion, occur in a sanguineous temperament, there is also manifested simultaneously with them, those symptoms usually attendant upon general plethora. But if the hemorrhage be the consequence of the violent action of an external cause, the flooding itself will be the first symptom developed. Internal hemorrhage may occur and escape detection, until its presence in the womb gives rise to such secondary symptoms, as
a sensation of weight in the loins and fundament, griping pains, and aches profuse, swelling and great tension and resistance of the abdomen, yawning and fainting, and all the phenomena produced by the loss of blood from any other source, cold extremities, feeble pulse, pallor of skin, &c.

Hemorrhage during the first months of antero-gestation, may be confounded with a return of the menstrual flux, but the mode of development of the accident and its attendant circumstances will generally enable us to discriminate between them. The unfrequent occurrence however of the menses
in the latter months of pregnancy, will justify us in diagnosing any discharge of sanguineous fluid in that period as uterine hemorrhage.

Unavoidable hemorrhage occurs only in the latter months of pregnancy, and differs in its occurrence from accidental hemorrhage, in coming on spontaneously, without any apparent cause, perhaps, when the patient is perfectly calm, quiet, and free from all excitement, in sudden gushes, and suddenly subsiding, recurring at uncertain intervals under similar circumstances &c.

An examination per vaginam,
in conjunction with these phenomena, will generally disclose a case of placenta previa.
A rapid augmentation in the size of the abdomen, syncope, spurning, cold extremities, feeble pulse, &c. are the characteristic symptoms of internal hemorrhage.

The prognosis is generally unfavourable. The quantity of blood discharged varies greatly in its effects upon different constitutions. That flooding, which would prove fatal to an anæmated patient, would perhaps exert a salutary influence on the athletic, vigorous, and plethoric constitution,
The danger to be anticipated from uterine hemorrhage, is greatly dependent on the stage of gestation in which it is developed, being proportionately greater to the mother as pregnancy advances, because of the greater development of the vessels from which the discharge proceeds, which, of course, will yield, in a given time, a greater quantity of blood, whilst to the child, it is most fatal in the first part of gestation.

Hemorrhage, during labour, is most to be dreaded, when it occurs in the first part of that process and more so in a primiparous woman, than one who has previously
Some children. As a general thing we apprehend more danger from internal than from external bleedings, because of the great difficulty of detecting the existence of the former. Of all the different varieties of uterine hemorrhage, that resulting from an implantation of the placenta over the os uteri, is the most perilous, both from its frequent occurrence in the latter part of utero-gestation and its great abundance.

Treatment

The special treatment of uterine hemorrhage is greatly dependent upon its source and time of occurrence.
But there are some general therapeuetic measures applicable to every variety of this accident, and are essentially necessary to secure the efficient action of the special means, such for instance as a well ventilated apartment, the free use of cold acidulated drinks, perfect quietude both of mind and body, in the recumbent posture, an elevated position of the pelvis on a hard unyielding mattress &c.

When it occurs in the first months of gestation, besides the above named preliminary means, are should employ refrigerant lotions to the abdomen, thighs, and external genitalia, and astringent
injections, and if necessary amphetamine to quiet the excitability of the nervous system. If these measures prove ineffectual, and the hemorrhage be profuse, we should not hesitate to induce the expulsion of the contents of the uterus, and permit it to contract upon the mouths of the bleeding vessels. During the last months of pregnancy, if moderate hemorrhage occur in a full plethoric constitution, venesection will be necessary, but if it be profuse, or proceed from an enemiated patient, venesection will be contraindicated. If profuse hemorrhage in this stage of gestation, resists the enforcement of the anti-hemorrhagic
system, the application of refrigerants, astringents &c., and continues obstinately persistent, we should employ ergot, and if that fail to arrest it, make use of the tampon, or when it occurs near the full term, perforate the membranes. When the loss of blood is so great as to occasion frequent fainting, stimulants are indicated to arouse the vital energies of the patient.

Hemorrhage proceeding from the implantation of the placenta over the cervix uteri, should be treated on the general principles already pointed out, and the necessary precautions enjoined to prevent its recurrence.
Mild aperients are frequently required to prevent constipation and when there is much nervous irritability an opiate is indicated.

In hemorrhage during parturition we should endeavor to facilitate the expulsion of the child by rupturing the membranes and as soon as the cervix is dilated or dilatable, by refrigerants, abdominal friction, ergot, etc. If however the cervix remains firm and unyielding compression over the uterus to prevent the blood from accumulating within its cavity, and the tampon should be applied. If the flooding were profuse, and the travail slow, the operation of turning and delivery with the forceps would be necessary.
Lastly, we will proceed to a consideration of postpartum hemorrhage, which is by far the most frequent occurrence and of the greatest importance to obstetrical practitioners. Hemorrhage at this period, being generally the consequence of a partial or total inertia of the womb, the indication is to employ those remedies calculated to arouse the contraction of the organ. To accomplish this object, various measures have been recommended, such as pressure and friction over the abdomen, titillation of the os tineae, cold applications to the hypogastric region, genital organs and loins, the introduction of ice or cold water in the cavity of the matrix, passing a current of electricity through the uterus, administration of ergot, application of the tampon.
If these remedies prove ineffectual, it will be necessary to introduce the hand and gently remove the placenta; or if the hemorrhage be subsequent to the delivery of the placenta, remove any coagula that may be present. The hand acts as a foreign substance to the internal surface of the uterus and excites its contractions, thereby constricting the mouths of the bleeding vessels and arresting the hemorrhage. There being always a great tendency to a recurrence of the accident, it is necessary frequently to administer opium, or the secalecornutum as a prophylactic.

In preparing this essay, the writer has attempted to advance nothing new or peculiar, being fully conscious of the truth of the maxim that "nullum est jam dictum, quod non dictum prius."

Pan B. Gilbert.