IN AUGURAL DISSERTATION
ON
Abortion

SUBMITTED TO THE
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BY
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OF
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To

John M. Matson M.D. Professor of Obstetrics and the diseases of women and children in the University of Nashville

This Thesis—the fruits principally of His Instructions—is respectfully dedicated by a grateful

Diplil,
The tendency of the medical mind at present is to diverge from the beaten paths of our science and shoot off in wild and erratic orbits bidding defiance to consequence and violating at naught the accumulated experience of ages. The pyros of the profession spurn the investigation of subjects shunned by their antiquity and consecrated in every age by the devotion of the brightest intellects that have adorned the galaxy of great minds in the medical firmament; because forever they can find nothing new concerning such old themes.

Auscultation, Percussion, Anatomy, and a host of subjects of minor consequence are magnified into all the importance of sublime sciences and shrouded with laudatory essays innumerable through the medical press; while woman the first and best gift of God to man, and the various and multifarious maladies to which she is by office subject for his comfort and happiness are...
passed by in silence and criminal neglect or else
literally swallowed up in the ever craving probity
of the medical mind for something new. These things
ought not to be so; and are enough to bring
reproach and deserved opprobrium upon the
profession.
Reflections like the above furnish the only excuse
I have to offer for choosing the venerable subject
of Abortion, as one bespeaking my most earnest
and faithful consideration at all times and
eminently worthy of my maiden effort upon
a medical subject. I do not presume to be able
to say anything new concerning it; but hope
by its investigation to become thoroughly acquain-
ted with its protracted form and management and
thereby make my knowledge subservient to the
alleviation and eradication of some of the
afflictions and sufferings that man and nature
entail upon woman—the fairest flower of earth.
The universality of our subject renders it doubly important, and throws new attractions of interest around its investigation. It is bounded by no geographical limits for women of every nation and climate are liable to lose the fruit of conception prematurely. Nevertheless, it has been observed to occur more frequently in civilized than in savage society, and also, to be attended, often with alarming and fatal complications. This obviously demonstrating that no condition of life however high and salutary can shield us from our part in the sequences of the primal curse. Nay more, it has been observed to happen oftener in those whose primary condition enabled them to lead lives of luxurious ease and indolence than in those of the opposite extreme of society. Among laboring women it is usually the result of some accidental violence, whereas, those who move in the higher circles mostly abort from nervous irritability and irritability of the uterine fiber consequent on their manner of life.
The premature expulsion of the contents of the gravid womb may take place at any period of gestation, but it undoubtedly occurs relatively much oftener during the first two months—Madame Lachapelle to the contrary notwithstanding. This subject has been divided into two stages where it took place within the first month, embryonic until the end of the sixth and after that premature labor but as they are void of practical utility I beg to be excused for their non-adoption. The process of abortion consists for the most part of two stages—first of the separation of the ovular attachments and secondly of its expulsion from the uterine cavity. The separation is always attended with hemorrhage and the expulsion with pain. The loss of blood is various in different cases sometimes only amounting to a few ounces and at others to a fearful hemorrhage and always constitutes the chief source of immediate alarm. In the more advanced stages the reverse mostly happens—the pain and separation come first-in order and the expulsion and hemorrhage...
riage follow. This difference principally arises from the fact that during the former period the vascular connections existing between the ovum and the uterus are exceedingly frail and the least contraction is sufficient to sever them and the uterine contents escape whole. But in the latter period the adhesions have become stronger and the ovum acquired volume so that a reverse order must necessarily take place.

Abortion may be either accidental or habitual. That is it may be the result of some mental excitement or violent injury compromising the integrity of the ovum or it may be habitual occurring often about the same period of gestation—there being no ostensible cause to which we can ascribe the mischief with any show of reason. Each occurrence predisposes to a repetition of the accident and when the uterus has once taken upon itself this periodical disposition to empty its contents it becomes extremely difficult to break up the morbid tendency and avert the threatened mischief. It is remarkable that habitual abortions are habitual occurrences. The fact is established and we accede to it without
philosophizing because of our ignorance in the premises. A female
may abort many times in succession however without destroying
her competency to bear living children. The most desperate
case apparently is not void of hope if judiciously managed.
And it behooves us then, as medical men to assure our
patients of this and urge them to vigilant perseverance
in the use of remedial measures.

Causes. The causes of Abortion have been divided and sub-
divided variously according to the caprices and tastes of author
and I shall by virtue of precedent pursue the same course
and regard them under the divisions of Constitutional Local
and accidental

Constitutional. These in my humble opinion have been
most shamefully neglected both in accounting for the
accident, and in its preventative treatments. Who has
most known women laboring under symptoms of Abortion
assigned to some trivial cause as an unpleasant odor
closed day after day even for weeks with Opium, and its
preparations without their constitutions ever having been
interrogated for the cause or one single remedy addressed to
its vice. Such practice is as dangerous as irrational, and
needs only to be mentioned to be despised. I have no doubt
but that scores of women have been sacrificed to the stupid-
ity of the Doctor in this respect. I have seen one lament-
able instance of it myself. And here without circumlocu-
tion I assert that he who disregards the condition of
general systems in threatened abortion is a dangerous prac-
titioner of the healing art.

There are two and opposite conditions of the general system
that undoubtedly predispose and often become the immediate
cause of miscarriage viz. anaemia and Pethora. Suppose for
instance that an anaemic female becomes pregnant or that the
anaemia supervenes on the pregnancy— the whole mass of
fluid circulating is deteriorated and highly unfit for the normal
sustenance of the constitution and of necessity every important
organe shares alike the devastations of the enemy. Their fun-
tions become impaired altered and proverted. The anaemia
vampire like secretly and silently sucks the life sustaining
blood from the frail nature of the womb and it absolutely
dies of starvation. Or the irritability of the function of menstruation
that obtains in this state of affairs may beget an irritability of
the uterine fiber incompatible with the longer sojourn of
the foetus within the cavity of the uterus. What more the
sickly brow, the sunken eye, the bloodless lips, the sour=
appetite, the sick headaches and in fine the host of
anaemic vitations that obtain in a large proportion of the
anaemicinhabitants if this state of the constitutions does not
play an all-controlling agency in the production of the
unfavourable result?

Females of Pethora habits having copious and painful men-
trual discharges accompanied usually with what are termed
hemorrhagic prolissions are known to be very subject to
abortal especially in the earlier months. In such there is
a local determination of blood to the uterus monthly, and
consequently an undue fullness or congestion of said organ
which always predisposes and may even excite a mis-
marshall. Pethora may induce congestions of other organ

besides the uterus containing by puerperal changes and placenta which will prove vincinal to gestation. Cruikshank's placenta
rupture consists in the extravasation of blood into the substance
of the placenta or between this mass and the parieties of the
wound and is the result of a pethorick condition of the vascular
system. When Abortion happens about the third or fourth
month as it is most wont to do we ascribe it to the relativ-
ely greater determination of blood to the uterus which takes
place at that returns about this time. Now this determination
is necessary to evolve the important changes that the foetal
organism undergoes about this time and if this normal
determination be competent to produce or even predispose
To a miscarriage we are compelled to admit to a high
rank among the causes of Abortion that state of the general
system denominated Pethorick and characterized by its
power and facility of producing local engorgements of the
internal visceræ.

All acute maladies of the general economy as the various
lethargy and idiopathic fevers as well as all the local...
Phlegmation pretend evil consequences to the regular process of
Gestation and though not followed invariably by miscarriage are
nevertheless to be feared. But of all diseases syphilis exerts the
most ruinous influence over Gestation whether it be the father
or mother that is afflicted. Black air and epidemic influence
are probably the cause of those epidemics of miscarriage men-
tioned by authors. There is a state of the general system char-
acterized by an excessive rigidity of the muscular fibres which
may be reflected upon the uterus retarding the process of
dilatation or producing an unusual sensibility of that
organ so that it will not support the strange and volum-
inous modifications it has to undergo during gestation
without fatal reaction. And in fine we are too prone to
ascribe Abortion to that about which the female was
employed where the first sign of its approach became
perceptible without seeking for an adequate cause among the
derangements of the vital powers. He say it was caused
some trivial matter when in all probability the state of the woman's
system was such that the accident would have been inevitable.
Local Causes.

Diseases of the uterus and its appendages. Females who have been married too young or too old often lose the ovum about the fifth or seventh month. May come they sometimes lose several conceptions consecutively, each however being retained a time longer than the one immediately preceding it. How such cases admit of but one rational explanation and that is made by referring them to irritability of the uterus itself. That organ has not been accustomed to the presence of contents and hence it rejects them until a number of pregnancies have established a species of tolerance just as repeated potions of tinctur eyretic establishes a kind of tolerance in the stomach. Again on the part of the uterus and its appendages we may also remember their various adhesions, tumors, displacements, inflammations, deformities, degenerations of tissues we've as occasional causes of miscarriage. They probably act in most cases mechanically.

Conditions of the contiguous organs and parts. Semenhea, cystitis and constiveness are the three most common pathological conditions that fall injurious upon the process.
of gestation that deserves especial notice under this division as abortives. They act by sympathy upon the uterus extending, hence irritation to that organ and thus soliciting it to contract. There may also tumors imbedded in the parietes of the pelvis or in the rectovaginal septum which may by their presence excite a degree of irritation incompatible with gestation.

Diseases of the ovum and its appendages.

During the first weeks of the existence of the human embryo it is a mere vegetable having a parasitic existence and is surrounded with too many causes of destruction to be able to resist them all successfully. Any of those acute maladies that are wont to attack the foetus soon after birth may set up during intrauterine life destroy its vitality and thence forth it becomes a foreign body and the tendency of the organism is to cast it off as a worm or other heterologous substance. Some of the diseases of the parents as scrofula or syphilis may develop themselves in the foetus and ensnare its expulsion. The placenta may be atrophied, hypertrophied or it may become the seat of purulent infiltration or a nidus for typhoidous formations.
The cord is liable to similar transformations as indeed are all the foetal appendages but the one most certainly followed by abortion is the destruction of the integrity of the membranous involution and the escape of the least particle of the liquor amnii. This is invariably followed by abortion sooner or later but mostly it occurs within a few hours from the rupture of the membranes.

Accidental Causes. These may affect either the womb or the mother. And may be summed up as follows: violent mental or moral emotions, excessive fatigue, rough riding, injury to the organs of generation, too frequent coition, falls, blows and lastly the injudicious use of the cold bath. I once knew a lady after an evening’s walk, plunge immediately into a tub of cold water and abort ere she could reach her bed in the same apartment. She had no signs of approaching miscarriage before she entered the water and in fact the way enjoying excellent health. It was in the fifth and a primiparum which may have had a share in the untoward result.
Symptoms. During the first two months, abortion is not ushered in or attended by any well-marked signs; for then the ovum slips away with but little more disturbance to the general economy than a difficult menstruation and is rarely attended with alarming complications. But at a more advanced period the phenomena are better marked and are of two kinds—such as foretell that the accident is likely to happen and such as show that the process has actually begun.

The first kind are those usually that denote the death of the fetus, as the sudden cessation of the morning sickness, the disappearance of the movements of the child, which up to this time may have been quite perceptible, the shrinking of the lower belly and a veritable inert body in the pelvis which falls about by the mere force of gravity. The female becomes restless, thirsty, complains of a sinking sensation at the epigastrium,
and coldness of the extremities. After a time those of the second variety make their appearance and are very similar to those of ordinary labor of which periodical pains and hemorrhage are the principal. Rigors and nausea sometimes attend the dilatation of the os when in labor, but not so uniformly as in labor. We must bear in mind however that none of the above signs are infallible for hemorrhage the most certain of all is not invariably followed by the lab of the os.

The above symptoms in conjunction with the history of each particular case will be ample to enable us to make out a correct diagnosis and I presume that sufficient for all the practical purposes of a theorist.

In reference to the prognosis it is almost mortal to the foetus; always occurring before it is viable. But in reference to the mother
it is usually stated not to be so grave as an ordinary labor. My own opinion is, that it is not so dangerous immediately but more so remotely; for the acute periperal diseases often supervene on natural labor than abortion, whereas those chronic maladies of the womb and its appendages which are the scourge of the female sex are most apt to follow abortion.

As to how any particular case is to terminate, I would advise the young practitioner to be guarded. We can confest the woman and her friends about as much by a qualified physician as by a positive one; and then if any thing untoward should occur, we escape shame and reproach. In fact, I have found it answer my purpose best to qualify my prediction as to the termination of any disease with an expression that it will probably terminate this or that way.
Treatment. In this we have one of three indications in view, the first is to prevent it in those accustomed to abort; the second is to stop the accident when threatened; and the third is to conduct the patient through the process when unavoidable. When we know a woman is habitually accustomed to lose the fruit of conception prematurely, it becomes our duty if controllable to prescribe such a course of regimen as will be most likely to counteract the disposition the womb has taken upon itself, to contract before the foetus is perfected. Perfect rest of body and quietude of mind are absolutely essential to the success of all cases where the uterus has formed a habit of expelling its contents prematurely. Hence we should confine the woman to one room and the recumbent posture from the time of conception until after the
period of quickening. For if we can conduct them safely over this period they are in general safe for that pregnancy. The fetus seems to then be broken loose and nature once more declares her supremacy and proceeds to a natural and happy termination.

We must not forget—meanwhile—that this state of inactivity may be a vice of the constitution which may prove more innocuous to gestation than the most forward course on the part of the female. The most common of these is constipation which must be obviated by the mildest aperients, or what is more preferable by a laxative diet, as the black bread may much any of the subacid fruits. Herein proceed we. We must also pay particular regard to the constitution and if the patient exhibit an anaemic tendency we use the mildest tonics as gentian cin sticking...
and the like; but if phthisis obtains then we must use the lancet-purge and adopt an anti phlogisticic regimen. We must confine abaque maria from the state of pregnancy. These measures will be successful if the accident is avoidable. But we will now suppose that the process has proceeded a step farther and we find the woman probably after exposure to some exciting cause laboring under periodical pains and it may be a slight sanguinolent discharge from the vulva. Miscarriage is now threatened and we must fulfill the second indication. The woman must go immediately to bed, every source of excitement as noise and bustle must be removed from her chamber, she must breathe a temperate atmosphere, her diet must be of the mildest and blandest kind and opium or some of its preparations must be
administered at short intervals and in small portions either by the mouth or rectum—the latter of which I think decidedly the most efficacious. In addition to the febrifuge with an irritable state of the system blood letting with saline purges will be very proper. But we will suppose that these means prove fruitless and miscarriage becomes inevitable which may be known by the pains gradually increasing and the bloody discharge augmenting. Now we will have the third indication in view viz. to conduct our patient safe through the Troublesome water. We must stop the opiates immediately and give all our attention to the woman. We must quiet her mind and dispel all apprehensions of immediate danger. In lingering cases we should make it a special point to prevent despondency seizing the mind of our patient.
for it cannot act otherwise than most injuriously.

The foetus will usually be thrown off in a few hours, whole if within the first three months but with the membranes broken up after that time in which case the foetus is expelled first and the placenta comes away subsequently. After the process is over we must enjoin the usual regimen for the puerperal month. The patient must remain in bed as long as any bloody or serous discharge continues; for as long as that keeps up we have infallible evidence that the uterus has not regained its healthy normal condition. The above plan will usually answer where abortion is not attended with hemorrhage, but when this occurs it renders the case much more formidable and dangerous and requires much more prompt and decisive treatment. It is admitted however that this complication
is not a very constant attendant on the process of Miscarriage. Yet when it does occur we must lose sight of the safety of the womb and direct all our attention to the salvation of the mother.
The first indication is if possible to empty the uterus so that it may contract freely and thus effectively stay the loss of blood. Now when practicable I should always decidedly prefer to do this by gently insinuating two fingers of the left hand into the vagina and scooping out the womb entirely. If this were impossible I should not hesitate to use the hook of Jewes with a great deal of care and caution or the forceps of the French.
After emptying the uterus rest in the recumbent posture, cold and astringent lotions to the vulva loins abdomen and thighs with
cool and acidulated drinks will in general suffice. But should they not arrest
the hemorrhage promptly the Tampon should be used. This is generally regarded as
a mechanical remedy but I presume that
its efficiency depends as much upon its power
to induce uterine contraction by its presence
in the vagina as upon its mechanical
obstruction to the flow of blood. I think we
may always resort to this remedy prior to
or a few weeks after the period of quickening
with a certainty of success. It can always
be at hand for a silk or cambrie handkerchief
well oiled and stuffed closely and ever
into the vaginal canal until it is entirely
full constitutes one of the very best as well
as most concealable plugs.

But we will suppose that it is impracticable
to empty the uteri artificially. Then I would re
the tampon and administer the ergot of rye with a view of exciting uterine contractions sufficient to force the foetus into the vagina when on the removal of the tampon (which should be done at least in twelve hours after its introduction to prevent undue irritation by its presence) it could be removed artificially. Now it sometimes happens that the vagina is so irritable that it will not endure the lodgement of the tampon within its cavity. In such cases, as the best substitute I would use preparation for two, three or more hours close on the vulva by means of a folded napkin.

In cases of retained placenta when it was impossible to introduce the hand I should employ the small wire scratch of Dr. Sewers and then the acetic solution in hope of exciting such powerful action in
in the uterus as would eventually throw off the offending mass and effectually stop the hemorrhage.

The sugar of lead (aerated Plumb: is highly recommended by Dr. Lewis in relieving hemorrhage but I confess that in the two cases that I have used it my expectations were not realized by any means. Still any remedy possessing the confidence of such a man as Lewis is not to be despised and I should administer it again with some assurance of success. However if we are forced to regard it as decidedly inferior to the Ergot. It is undoubtedly less efficient and I believe left certain in its action. The fact is I should not rely on any one or two remedies in a case of profuse hemorrhage. I had rather hope on the whole armor and
do battle if possible with a thousand weapons.

I will just remark further that in cases of depression from the loss of blood stimulants become absolutely essential and of these I believe Brandy and Opium to be the very best. I should give them without stint and with great confidence of benefiting my patient by their liberal administration.

Docthylaxis. After abortion, direct the woman to procure a child and nurse it regularly for eight or ten months and I care not how strong the habit of aborting may have been fixed upon the system she will in all human probability carry her next pregnancy to full term. In cases where there is no
local disease of the pelvic visera. This prophylactic remedy may be used with a certainty of averting the unhappy accident and breaking up the morbid process upon which the habit depends. This subject was first brought to my notice by Dr. Myche of Huntsville Ala., while I was a student of medicine in Lebanon. He had recommended it with entire success in seven cases. The first was that of a Mrs. Robinson who by accident nursed her sister McClung's child. She had aborted four times in succession but after nursing bore three living healthy children in succession. The old Dr. taking the hint from this case then recommended it in the seven other cases with the happiest result. Three of them had aborted three times in succession—two twice and two once.
I was gratified to hear Dr. Watson in his lectures recommend this as a prophylaxis from his own experience in several interesting cases. He never knew it to fail, from the authority of those two great and observant physicians we are led to believe that habitual abortions are as effectually shot of their appalling horror by this new discovery, if I may so term it, as small pox was by the discovery of vaccination by the great Jenner.