AN INAUGURAL DISSERTATION
ON
Puerperal Peritonitis.
SUBMITTED TO THE
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FOR THE DEGREE OF
Doctor of Medicine.
BY
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OF
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To Professor Eve & Watson

Please accept the accompanying as a slight token of respect and esteem from one
who will ever remember your kindness with the utmost feelings of gratitude.

Nashville, T. Jan. 18, 1858.                     G.W.C.
Perforated Peritonitis

"Obstetrical Principles"

In selecting Perforated Peritonitis as the subject of a thesis, I acknowledge myself indebted to the writings of Drs. Denman, Leake, Nulme, and Gordon, whose monographs on this subject have rendered their names illustrious in the annals of medical literature.

There is but little difference in the general description of the disease as given by them: Each has given its history, its appearance and their mode of treatment. Each has described its nature, its symptoms and its causation. Each has portrayed its incipiency, its progress, its remission, and its decline. Each has testified to
its rapidity, its violence and its mortality. Each has declared that there is no disease, the plague excepted, in the whole catalogue of "ills to which human flesh is heir," so uniformly fatal as puerperal fever, and they are fully sustained by the hospital reports and the accounts of the various epidemics which have been published.

The earliest writers on medicine were well acquainted with the disease, as evinced by the description of cases given by the Greek and Arabian physicians during the palmy days of their country, but it was not until near the close of the last century, that the nature of the disease was fully understood, and the proper treatment pointed out, by Dr. Gordon.

Its history, in modern times, especially in Europe, where during the last century it prevailed extensively as an epidemic, deserves its ravages
as truly awful," occurring in private, but
more numerous and fatal in hospital practice
and from which no class of society appeared to
be exempt, the rich and the poor, the latter
more frequently, the strong and the weak, the
plethoric & the anemic, being alike amenable
to its influence, spreading the rural districts, but
chiefly prevailing in the crowded cities, and
in the wards of lying in hospitals, transported
from the cot of the lowly to the luxurious couch
of the wealthy, through the medium of the
attending physicians or nurse.

Happily for the female sex, it has never
prevailed to any great extent as an epidemic
in our country, and even sporadic cases are
rare, but as they every now & then present
themselves, it behoves the medical practitioner
to so understand the disease and duly to appre-
ciate its almost invariable fatal tendency, as
to leave no effort unspared to counteract its first symptoms and nip it in the bud by active treatment before it is too late. After close observations and experience that has been so clearly pointed out by Dr. Gordon, that a physician would be liable to the utmost censure if he either failed to adopt, or neglected to pursue the plan so clearly pointed out, and the only one too which can promise any relief.

Symptoms: The symptoms of puerperal peritonitis, are generally so uniform, that the description of cases given by the authors whom I have consulted vary very little.

Puerperal Peritonitis, puerperal or Child bed fever, is restricted to a malignant inflammation of some portion or other of the peritoneum of parturient females. Fever and inflammation of the peritoneum are absolutely necessary to its full development. This fever is
is generally ushered in by a chill or rigor more or less severe, frequently suddenly and without any apparent cause or previous indisposition. The chill is followed by a fever, more or less high, which will persist even after a profuse perspiration, also a severe constant pain, and tenderness of the abdomen.

The fever is of a high inflammatory grade and the pulse is quicker than in fevers generally. The pain is generally situated in the right iliac region, but whenever situated is more painful than the labor itself, and which is greatly increased by pressure. There is also pain over the eye brows, headache, and the skin is generally hot & dry or at other times colder & clammy. The secretions are generally arrested, the bowel discharges are also arrested, or very much diminished. The loins are generally constipated. The tongue is coated with a white fur, which becomes darker
as the disease progresses,

The disease, if allowed to pursue its course in the short space of from twenty-four to seventy-two hours assumes an entirely new aspect. The circulation becomes impeded or arrested in the peritoneum, the abdomen gradually enlarges by the effusion of serum into the cavity of the abdomen, the pulse runs up to 150 or 160 per minute. The respiration becomes paler and thinner and the breathing becomes more laboured. Each inspiration presses down the diaphragmatic abdominal muscles upon the inflamed peritoneum inducing intense pain, and thus impeding the free action of the lungs. The patient lies constantly upon her back. The circulation having been impeded, pus is now generated which corrupts the blood in the diseased peritoneum from whence it flows through the portal veins, initiating the secretions of the liver, which again in its turn-
induces vomiting if thrown into the stomach of if into the intestinal canal, a profuse offensive diarrhoea. By being absorbed into the general system, it produces putridity, and the character of the disease becomes changed from an inflammatory in the beginning to a typhoid type towards its termination. It is in this stage, towards its close that the pain in the abdomen ceases entirely, mottification has ensued, and death is inevitable.

The disease is very rapid in its course, frequently running through all of its stages in forty eight hours sometimes sooner, but generally proving fatal on the fifth day.

Postmortem examinations reveal a high degree of inflammation of the peritoneum, and its various duplicatures, and frequently involving the viscera of the abdomen. The omentum and ovaries are principally affected, sometimes being
engorged with blood, at other times in a state of suppuration, while the cavities of the abdomen are frequently filled with serum effusions mingled with evacuable lymph, which appear to roughen the surfaces of the different viscera by agglutinating them together, to the peritoneum and to the abdominal parities.

Causes. The causes of puerperal peritonitis have been attributed to different circumstan-
tances, to anything that would depress the nervous system, or that would affect the general health, or the Chemical, vital or phyle-
cical constitution of the blood, to previous illness, to improper food, the use of ardent-
liquors, to cold and moisture, to hardships during gestation, to the gravid uterus, exposure to
soon after confinement, badly ventilated rooms, to constipation, local hyperemia, and more
than all others combined, is probably infection.
as pointed out by Dr. Gordon in his account of the epidemic of puerperal fever in Aberdeen, about the close of the last century.

The immediate cause of puerperal peritonitis is parturition. It has never been shown to proceed but always to succeed from that, though it may be complicated with other diseases and thus appear to have commenced before parturition.

The disease frequently assumes an epidemic, and very malignant form, and becomes very contagious or infectious, and is easily transported from one bedside to another through the agency of the attending physicians. This peculiar virus or contagious principle of puerperal peritonitis has been so often pointed to, as one of the causes of its propagation, that due caution should be exercised to prevent its propagation through
our instrumentality. Unfortunately the contagious principal is not restricted alone to preparturial peritonitis, for its propagation of the disease, but is resident also in Erysipelas, with which it is frequently complicated, with Typhoid fever & Scarlet fever, Small Pox & Hospital Gangren and decomposing animal matter or bodies especially such as have died of inflammatory diseases. Such being the case we should endeavor to remove the parturient female, as far as we are able, from the influence of any thing that might tend to the development of the disease, even to the exclusion of parties who have been within the influence of the infection.

Pathognomonic Signs. This disease has certain characteristic symptoms which may be regarded as pathognomonic, and
which will briefly enumerate, viz., after the second or third day, sometimes, immediately or a few hours after delivery we are called to the bed side of a patient who has had a chill, which has been followed by a high fever, pulse ranging about 140 beats per minute, with severe pain in the abdomen, which is increased on pressure, with a general suspension of the secretions, we may reasonably conclude that she is labouring under peritoneal peritonitis.

Diagnosis. It is easily distinguished from the pains, when we remember, that the latter are intermittent or periodical, nor are they increased on pressure, nor is the pulse increased much higher than in health.

It is much more difficult to discriminate it from Hysteresis, here the pain is situated in the region of the pubis, and it increases
at each uterine contraction, is constant, or lancinating, the peritoneum not being so much involved, the abdomen is not so tender nor so much enlarged, the pulse is slow & quick, and only about 100 beats per minute, and the secretions especially of milk, are not arrested.

From Cervicitis, by the burning pain in the iliac region, and a rectal examination will discover the cervix enlarged, & probably lying against the rectum, Cervicitis is so frequently combined with an attendant superficial periuterinitis and partakes so much of its nature, that the treatment is essentially similar.

From Malarial fever, by the intermission or remission that would follow the sweating stage, by the pulse, and by the absence of the severe pain in abdomen.
It is discriminated from milk fever by the fact that the fever in this case precedes the secretion of milk, and is followed by a plentiful flow of it, while superficial peritonitis generally succeeds that event, and arrests its further secretion, also the absence of abdominal pain &c.

Prognosis. In such an obstinate disease, running through all of its stages with such rapidity, and having such a fatal tendency, we should be very guarded in our prognosis, and especially if the first stage or the first twenty-four hours have been permitted to pass without proper treatment. The first stage passed the pain and swelling of the abdomen increase, the pulse becomes quicker and weaker running up to about 160 beats per minute, the respiration becomes more hurried and difficult.
the tongue becomes dry & brown, the face
and extremities are frequently darkened
with a cold clammy sweat, or hot's dry;
if the bowels are constipated, green bilious
matter is frequently vomited, or a profuse
offensive diarrhoea takes its place. We
should be on our guard, should all these sym-
ptoms at once suddenly, and not be deceived
nor lulled into hopes nor promises
of a recovery; it is too frequently the
calm that precedes a fatal termination.

If on the other hand should this
abatement of symptoms take place
after frequent & copious evacuations
from the bowels, and the abdomen
gradually inflates, with a moist skin
the pulse less frequent, but increased in
volume, the restoration of the bowels
of the secretions generally, a return of
maternal feelings, they may be regarded as favourable to the patient's recovery.

Efforts have been made to find out if possible some means to prevent the development of the disease. Dr. Gordon has recommended purging for this purpose, and which appears to answer the purpose better than anything else that has been presented.

A purgative bolus is given on the morning after delivery and either prevents or anticipates the disease, and has now almost become a universal custom throughout our country.

Stages of the disease. By regarding the disease as being divided into three stages, we can more readily comprehend the reason for the various modes of treatment recommended by the different practitioners. These stages have been classified as 1st, the stage of inflammation, 2d a Stage of Leukorrhea and 3d a Stage of Effusion, each consequently varying in
Character and each consequently requiring a different course of treatment.

Treatment. The first stage is characterized by a high degree of inflammation and fever, and is generally very brief running its course in from 12 to 24 hours, seldom longer. The chill has passed—there is a high fever; the pulse is about 140 per minute, the pain in the abdomen is excessive, it is nature warning, it declares the character of the disease. The indications are for depletion, and the history of puerperal peritonitis, teaches us that depletion to be of any benefit should be of the most active kind, and done early & boldly.

Vesiculation is the main reliance on which the life of the patient depends, and on which the physician must rely. Its therapeutic effects
cannot be overestimated. There is nothing to supply its place, and it should be done early, immediately after the child is feasible. The amount taken should be regulated by the state of the patient, for there is one or two requiring that more blood should be taken than anemic, the least quantity in either case should be about twenty ounces, but by the number of ounces, one cannot be guided, and it would therefore be better to bleed until there is an approach to syncope, and by this extent should happen on account of some peculiarity of constitution, before the desired amount is taken, then the bleeding should be repeated soon after revival from fainting.

Bleeding relieves the engorged state of the blood vessels of the peritoneum, it lessens the pulse, it allay the pain, and hence the fever, and should never be neglected.
Venereum has also prepared the system for further depletion, which should be done by active cathartics, so as to produce free and copious evacuations from the bowels. The best preparatory preparation for that purpose is that recommended by Dr. Gordon Colomel.

Senna

Boose of pow. gr. I,

and made into a bolus, to be taken after bleeding. After the clearance is expected, it should be maintained by the administration of saline purgatives, combined with jalap, until free evacuations are produced from the bowels, daily—five or six days.

At night opiate should be given to sustain the system, during this action depletion, and to procure sleep.

"Kind nature's sweet restores."
This mode of treatment, if administered at the proper time, almost invariably terminates the disease. The bleeding relieves the vessels of the local hyperemia, and purgatives carry off the office matter accumulated in the system. I will again repeat, that the bleeding ought to be performed as soon after the chill as possible; at any rate within the first twelve hours, if longer neglected the danger is increased, but may be retarded to, until twenty four hours after the attack.

If however the fever should persist, in spite of the first bleeding, it should be repeated in 6 or 8 hours and apply a large number of leeches to the abdomen, and bleeding from their bites encouraged by fermentation after they are taken off.

Should bleeding fail, her fate is sealed. It may be regarded as settled, that no
well developed case of puerperal peritonitis has ever yet been cured without
bleeding, aided by thorough purgation.
Purgation alone can do no good but
becomes invaluable when following bleeding.
A blister may be applied to the abdomen
over the seat of the pain, and after ressica
tion, should be followed by a plaster composed

\[
\begin{align*}
&\text{Jodine}, \\
&\text{gr } x \\
&\text{Jodide potass. } \quad \text{xx} \\
&\text{Hydargyrine } \quad \text{xx},
\end{align*}
\]

And we should endeavour to produce a
partial phthisis, or an approach to it by
the administration of small and repeated doses
of calomel every hour.

If the disease distinctly persists it
continue, on the second day, it assumes a loy
type; the pulse runs up to 180 beats per min-
ute, the abdomen becomes as large as before.
delivery and the pains are left acute at times again greatly increased, the cutaneous becomes of a livid hue, the tongue becomes dry, brown and parched. the respiration is hurried & difficult, the peritoneum is bordering on gangrenous, and the disease has reached its second stage.

The Typhoid Character of the disease makes it that we should be careful in the administration of our remedies. The heroic practice so indispensably necessary in the beginning of the disease should not be resorted to. Bleeding would now hasten the patient to the tomb.

The bowels should be kept open by the saline purgatives, pain allayed by opiates, and we should succor to sustain the system by mild food. The bilious accumulations in the intestinal canal can be relieved by the use of acidulous fruits & drinks.
All stimulating food & beverages should be carefully avoided, all brandies, wines and cordials, all preparations of animal food—Soups & broths should be carefully forbidden. The disease still pursuing its course, serous effusions are poured out into the cavities of the abdomen, the case becomes utterly hopeless, the pulse is fluctuating, the countenance mild, and expression of the greatest destitute, the abdomen is greatly distended, the pains sometimes cease, at other times, greatly increased. A colliquative diarrhoea has set in—it is beyond the power of nature to rectify; the vital organs are succumbing to disease;—the albumen has melted down before the internal fire; the arteries are generally in a state of suppuration, the mental faculties for vanity give way; the patient is frequently
fallen into false hopes of a recovery by
the abatement of pain & the exemption
from distress. All our efforts have been
vain in attempting to arrest the impending
doom.
We behold the patient on the verge
of eternity, we can but wipe the cold
Clammy perspiration from her brow. All
pain has ceased and the mother in ful
filling falls a victim to heur untimely
fate.
A scene so solemn the death bed scene
of woman under such circumstances
She regarded as a type of her sex,
a type that never erred but once
and then only when beguiled by the
persuasive eloquence of the fiend of
hell the partaker of

Of that forbidden tree, whose mortal taste
Brought death into the world & all mankind

the fruit
For is properal peritomith the luit of thee
mos, a decane pecilin to the partunm
ainw, and a monunent of the fullfillment
of hearns decre., "in sorrow then Shalt Bring
forth Chanotn."

"She never errcd but once, and had that
error been committed at a later period
of the world, after four thousand years of
right and happy deeds"—She who has ever
been a ministering spirit around every
cooch of affliction,—"She, who was the
luit of the faithful at the foot of the Cross,
and, sped earliest with Spices to her Sar-
oni's tomb; the accusing angel would
have beene the charge against her to heav-
ens chancery in vain."