University of Maryland Theses

Early Doctor of Medicine and Doctor of Physic Dissertations with Corrected Tables of Contents

These manuscripts described as either an Inaugural Dissertation or an Inaugural Essay were presented to the University of Maryland for the Degree of Doctor of Medicine and/or Doctor of Physic during the years 1813-1887. The individual dissertations were bound together during the 1940’s. The original tables of contents for the bound volumes contained multiple errors in authors’ names, titles, and/or years. To address these errors, an additional “Corrected Table of Contents” has been inserted at the beginning of each volume.

The project team who investigated and corrected the tables of contents were Richard J. Behles, Historical Librarian/Preservation Officer; María Milagros Pinkas, Metadata Management Librarian; Angela Cochrane and Carol Harling-Henry, Resources Division; Sarah Hovde, Abra Schnur and Megan Wolff, Services Division.

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² The “Fifty-Eight [sic] Annual Circular of the School of Medicine, Session 1865-66, and Catalog of Matriculates, Session 1864-65, With the Graduates of 1865,” lists Gustavus C. Dohme as an 1865 graduate. (Collected Annual Catalogues of Students (1837/38 – 1879/80))

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UNIVERSITY OF MARYLAND

THESIS

1864 (c)

Harper, I. S.
Nathaniel

Smith, M. S.
Author Unknown

Carter, J. M.
James

Price, J. H.

Fawcett, Christopher Joseph

Mudd, J. A.
James

Billingslea, J. H.
Gustavus

Dohme, G. C.
George Henry

Cairnes, G. H.
Augustus

Dodge, A. W.
Miller

Reid, E. M.
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Simmons, A. T.
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Beans, R. A.
William

Robertson, W. W.
Henry

Dousihe, W. L.
Emory

Smith, T. E.

Rutter, Alexander

Dunlap, Albert

Pregnancy
Intermittent Fever
Gustavus
Malaria
Pneumonia
Atulogy
Diabetes

Gun-shot Wounds

Fractures
Typhoid Fever

Report of Surgical Cases
The Human Encephalon
Yellow Fever
Gun-shot Wounds

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An Inaugural Dissertation on
Pregnancy Submitted to the Examination of
the Provost Regents and Faculty of Physic of the
University of Maryland For the Degree of
Doctor of Medicine by Isaac Samuel Harper
of Maryland
Anno Domini 1864.
Pregnancy

I propose in the following pages to say a few words in regard to the manner in which the human race is propagated. First I propose to examine the contrast between the unimpregnated and the gravid uterus. The texture of the unimpregnated uterus is close, tough, firm and inelastic, when gravid it is loose, spongy and distensible, capable of being drawn out to a considerable extent without laceration of its substance; the unimpregnated uterus possesses no power but that of secreting and assisting in the function of conception, the gravid womb possesses the power of affording lodgement to the embryo nourishing and eventually
expelling it, The section of the unimpregnated uterus displays an unoccupied cavity communicating by an open mouth with the vagina below having therefore no contents, The gravid uterus contains the membrana decidua and the ovum, which latter consists of the Chorion, the Amnion, the Liquor Amnii, the Placenta, the funis-umbilicalis the Fetus and in an early stage of pregnancy the umbilical vesicle.

The first we have to consider is the Membrana Decidua it is an opaque membrane lining the whole cavity of the internal surface of the uterus. It is divisible into two layers, is highly vascular and is supplied with blood from the uterine vessels,
As gestation advances the two layers come in close contact at every part, except where the placenta intervenes between them, for according to Dr. Ramsbotham one layer fuses between it and the uterus, the other traverses the secreted face of the organ, being interposed between its substance and the chorion.

The deciduous membrane is a product of the uterus and does not originate in the ovum it is furnished by the uterine vessels, and its secretion commences immediately upon impregnation taking place; at first it consists of a tenacious fluid, and by degrees assumes the character of a perfectly organized tender membrane, it is subservient both to the nutrition of the embryo and to the preservation
of its vitality, and it seems to perform for the new being functions analogous to those which in an after stage are carried on by the placenta itself.

When the ovum enters the uterus it becomes partially imbedded in the substance of the decidua and this receiving increased nutrition at the part with which the ovum comes in contact grows up around it until it has completely enveloped the ovum. The surface of the ovum when thus surrounded by the deciduous membrane becomes shaggy by the growth of villous turfs from its surface which proceed to form the elements of the placenta; the chorion is a thin transparent
membrane very tough and is an external envelope or covering to the whole of the ovum, with the exception of the placenta which is interposed between it and the uterus. It passes on the foetal face of the placenta and gives a coat to that surface as well as to the funis umbilicalis. It is a constituent part of the ovum from the most early period of conception for it is found in extra-uterine pregnancy not in the uterus but enclosing the embryo itself. It in conjunction with the Amnion is a protection to the embryo, also forming the bag for containing the Liquor Amnii, and for o
No text is visible on this page.
soft wedge by which the structures
during labor may be dilated with
the least chance of injury.

The amnion is a very thin
transparent and tough membrane
in structure very similar to the
chorion and runs in contact
with it throughout its whole extent
except at the funis umbilicalis where
they are separated.

It is the analogue of the
chorion so far as a covering to
the ovum is concerned, but in
addition it performs a distinct
function in the secretion of
the liquor amnii.

The amnion is by far the
strongest of the two membranes,
but these conjoint membranes do
not always possess the same degree of toughness for in labor they sometimes break on the first accession of pain at other times they remain entire and thus retard the progress of delivery, Dr Montgomery says in some instances they have not ruptured at all before the birth of the child but the ovum has been expelled whole even when it has arrived within a few weeks of its maturity"

In some women the membranes break twenty four hours before labor actually begins, when such is the case the labor is generally tedious and severe.

The Liquor Amnii is the name of the water inclosed by the Amnion
in which the foetus floats the quantity of the fluid though positively increasing with the growth of the ovum throughout the whole of gestation appears to gradually diminish in proportion to the size of the foetus, for when the ovum is not larger than a small bean the Liquor Amnii is said to exceed an ounce, whereas at the end of gestation it will seldom amount to more than a pint; I think if the fluid increased in proportion to the growth of the foetus at the end of pregnancy it would measure more than a quart.

Its use appears to be to defend the embryo from the pressure
of the walls of the uterus and to protect the fetus and placenta from compression during the latter months (which would impede the flow of blood through their vessels) also to allow free motion to the limbs of the fetus. Besides these advantages it performs a very important office during labor by acting as a soft wedge to dilate the cervix and os,

The Placenta is perhaps the most important of the foetal appendages being the medium of communication between the mother and her infant and the organ through whose means nourishment is supplied, growth
perfected and its life sustained, it is an irregular circular mass composed entirely of foetal vessels and the ramifications of the umbilical arteries and vein.

It is generally from six to nine inches in diameter and about one inch in thickness where the umbilical enters, it gradually becoming thinner towards its edge.

Its average weight is about a pound but it sometimes varies considerably, which I suppose is influenced by the size of the child.

It has two faces one maternal the other foetal.

It is covered on the maternal face by the decidua vera and on foetal by the decidua reflexa.
by the Chorion and the Amnion; its purpose is to render the blood fit for the continuance of life, but not solely, for it is also the means of conveying nourishment to the foetus and of performing at the same time two of the most important functions that of giving action to the lungs and stomach. It may be attached to any part of the internal surface of the uterus, but is usually found on the posterior surface, sometimes at the fundus, occasionally towards the neck and more rarely still over the mouth itself, in which latter position it is apt to give rise to much loss of blood when the orifice opens in labor.

The Tunis Umbilicalis is a rope-like
cord running from the navel of
the child into the body of the
placenta, it varies much in length,
in some cases not exceeding six
inches in others being four or five
feet; its average length is from
eighteen to twenty-four inches.

It gives a passage to three blood
vessels, two umbilical arteries and
one umbilical vein;
The arteries are longer than the
vein as they generally continue
their Course in a more spiral
direction around it,
The arteries carry adulterated
blood from the body of the foetus
to the placenta and have a strong
pulsation (and is called the—
Placental Souffle if detected when
auscultating for pregnancy and may be heard after the fourth month; the vein carries back again to the foetus pure blood imbued with the principles of both vitality and nourishment.

The vesicula umbilicalis also constitutes a part of the ovum in its early stage; it is a small sac not larger than a small pea, its appearance is first noticed during the early part of the second month, when the fluid it contains becomes thicker; then the vesicle begins to diminish in size and soon disappears altogether. Its use has never been fully determined and it is to a certain degree still involved in mystery,
I will therefore leave it until further discoveries enlighten us upon the subject.

The foetus at the end of gestation usually measures from eighteen to twenty inches in length from the heel to the crown of the head and weighs from six to eight pounds generally, but there is sometimes a great difference especially in the latter which is not easily accounted for, some children at birth will weigh twelve pounds or even more while others will not weigh over five my youngest child (which is now a fine healthy boy) only weighed five and a half pounds the second day after birth.

The usual position of the foetus in
uterus is head downwards towards the os uteri, though there are various other positions which it sometimes assumes for correctly speaking it has no certain position, but it is more frequently found in the situation above named.

The symptoms of pregnancy are first suppression of the catamenia though that is not always the case (for Dr. Montgomery mentions several instances where the menses have continued until the end of gestation) morning sickness sometimes salivation but unlike mercurial ptyalism from which it is easily distinguished by the absence of soreness of the gums and the peculiar fetor which
follows it, enlarged mammae, dark colour of the areola, quickening, enlargement of the abdomen, 
Kiiesteine in the urine when allowed to stand and has an odour something like cheese, dusky colour of the 
vagina which generally makes its appearance from the second to the fifth month, it is 
considered by some writers to be an almost infallible sign, it is most distinct on the inside of the mons pubis and about 
the orifice of the urethra and clitoris and it becomes more apparent as we ascend towards the upper end of the vagina, the great objection to this sign is its inaccessibility in a great
The pulsation of the foetal heart is the most certain of all other signs and is generally audible at the termination of the fifth month; the sound resembles the ticking of a watch heard through a pillow. The frequency of the pulsations is from a 120 to 140 per minute.

The Placental souffle is the next sign of importance and may be heard after the fourth month. Having now described all the different parts of the ovum and given the most important signs of pregnancy I will now proceed to describe the progress of gestation more at length.

During the first month of
pregnancy the changes are not very appreciable, the uterus is somewhat larger, the os and cervix are soft, the uterus descends a little lower towards the outlet of the pelvis, which often causes pressure on the nerves sometimes producing cramps. Sickness and vomiting, sometimes ptialism, suppression of the catamenia, tenderness of the mammae &c. During the second month the abdomen becomes somewhat flattened, the cervix is increased in size and is directed towards the symphysis pubis, the canal of the cervix is closed with a kind of gleetinous plug, the os can be felt lower than usual, but as yet there is
not much visible sign.

At the third month there is a continuance of the nausea and vomiting, depression of the umbilicus slight prominence of the abdomen the os uteri has slightly changed its position, the areola begins to turn brown which turns to a deeper hue as gestation advances until at the close of pregnancy it is in some persons almost black, Kiesemeine in the urine, increased prominence of the nipple.

During the fourth month the uterus begins to rise from the pelvis into the abdomen and at the termination of this month the fundus may be felt two or three inches above
the symphysis pubis, the dusty colour of the vagina is generally very easily distinguished at this time about clitoris. The os uteri is elevated considerably above its former position and its mouth is still closed in primiparae, but in multiparae is sufficiently open to admit half the first phalanx of the index finger.

At the fifth month suppression of the menses, increased prominence of the umbilical region, usually cessation of the nausea and vomiting now take place, though in some cases it continues throughout pregnancy. The uterus has now left the cavity of the pelvis entirely and has
ascended into the abdomen, its fundus leans backwards towards the sacrum. The os is now more soft and elastic and will admit of the further introduction of the finger, generally within the circle of the orifice are a number of little muciparous glandulae projecting slightly and feeling like small smooth vesicles which appear to roll under the point of the finger, according to Dr. Montgomery the presence of these glandulae is a very decisive mark of pregnancy.

During the sixth month the fundus uteri is now within an inch of the umbilicus, upon auscultation the bruit de souffle
and the pulsations of the foetal heart may be distinguished, the latter is most distinctly heard about half way between the umbilicus and the symphysis pubis a little to the left; I have heard the sound several times and it is quite easy to distinguish when once heard, as I said before (when giving the symptoms of pregnancy) it resembles very much the ticking of a watch heard through a pillow. The movements of the foetus may now be very easily felt by placing the hand on the abdomen. Ballottment can now be practised and when performed the patient should either be in the upright position
or in the semirecumbent posture.

The colour of the areola is now a deeper brown, the mammae is very much increased in size and in some persons become quite painful.

The seventh month, the urine now becomes redder and more turbid, kriesteine is more easily distinguished and if the urine be exposed for a few days in a glass the kriesteine will form first in specks which will gradually unite into a scum a portion of which sinks to the bottom, I have tried this experiment and find that the portion which sinks to the bottom becomes converted into a solid substance.
The mammae are now very much swollen and milk may be pressed from them. The abdominal tumor is much increased in size, the umbilicus becomes foating, the cervix is only half the original length, the fundus can be felt a little above the umbilicus, the movements of the child may be detected through the abdominal walls. The discoloration of the areolæ is increased,

During the eighth month the cervix as a general rule is not more than a quarter of an long, the fundus has risen about two and a half inches above the umbilicus, the os is so
high it can scarcely be reached. Ballottment felt before now becomes obscure on account of the increase of the size of the foetus whose movements are more active. The foetal pulsations still continue. In primiparae the os uteri is still closed, but in multiparae it is open enough to admit the whole of the first phalangeal bone; during the first half of the ninth month the vomiting sometimes reappears from pressure of the uterus against the stomach.

The abdominal tumor has increased so much that the skin is much stretched and very tense, sometimes difficulty of respiration, the fundus uteri has gained the epigastric
region. Ballottment has entirely disappeared. The os in multiharvae is sufficiently open to allow of the introduction of a phalanx, and a half of the first finger, in primiparvae it is slightly opened but not enough to admit the finger. The areola has now turned to a deep chestnut colour and in some cases almost black, sometimes the milk is seen oozing from the nipple.

During the latter half of the ninth month the vomiting ceases the abdomen has fallen the fundus uteri has sunk lower down in the abdomen there is frequent but ineffectual desire to urinate, there is
Considerable difficulty in walking, sometimes varicose state of the veins of the lower extremities, pains in the loins and cholics, the respiration less oppressed during the last week in consequence of the spreading out at the internal orifice, the whole cavity of the neck becomes confounded with that of the body, and the finger in reaching the membranes only traverses a thin orifice in primiparae while in multiparae the external orifice of the cervix is thick rounded and unequal.

During pregnancy all excitement should be avoided, the exercise should be moderate and of a kind calculated to invigorate
the general health, the diet should be simple and unirritating and both diarrhoea and costiveness should be avoided or relieved, castor oil or pills of rhubarb and soap form the best aperient; sickness of the stomach may often be relieved by lime water and milk.

Now gentlemen I have done I do most sincerely thank you for your kindness and attention to me for the past two years and I do assure you I shall often look back with pleasure to the many pleasant hours I have spent in the medical department of the university of Maryland. I hope that you
may each live in the enjoyment
of good health for many years
and that every winter the number
of students may increase.
And in conclusion I wish
you all the happiness and
prosperity this world can
afford and eternal happiness
in the world to come.

Isaac Samuel Harper,
An Inaugural Disquisition
on
Intermittent Fever
Submitted
to the examination
of the Provost, Regents, and Faculty
of the University of Maryland
for the Degree of Doctor of
Medicine.

Nathaniel S. Smith
of Accomac County, Virginia
Dec. 23, 1863
Gentlemen,

In accordance with a long established rule of the University of Maryland that each candidate for Graduation shall produce a Thesist for your honorable consideration, I offer the following imperfect and unconnected remarks on Intermittent Fever, should our learned Faculty detect any errors in the following pages, I hope they will be pardon.

Respectfully submitted by

Dec. 23rd. 1863

[Signature]

Abbeville, Va.
Chills and fever

This is a disease known to us by its febrile paroxysms recurring at stated intervals and the absence of fever. The intervening period from the end of one paroxysm to the commencement of the next is called the interval. There are three types of the fever—quadrilateral, tertian, quartan. By the term type we mean the order in which the paroxysms return. In the quartan the chill returns every day at or near the same hour; in the tertian every second day; in the quadrilateral every third day. Besides these we have other types but as they are so rare occurrence...
I will have one to the double tertian which we not unfrequently meet with in practice. By Double quintidian is where there are two chills in the same day; double tertian with a chill every day, that is on the first and third, the double tertian is the only one that often occurs. Some authors assert that there is no such thing as double tertian. The remission of an intermittent consists of three distinct stages—the cold hot, and sweating. At the commencement of the cold stage, the patient feels a sense of languor and weakness.
His face is generally pale, his features are shrunked. The feeling of Cold is first experienced along the spine as if water were trickling down his back. The sensation down extends over the whole body, rigors, and chattering of the teeth, there is generally spasmodic shaking of the whole body, more on the nansea and often headache, with spinal pains. Very often there is what is termed "dumb ague of which I have been often affected, the fever coming on without any marked degree of ague only a sense of
pigeon cholera. It is not uncommon to see intermittent chilliness and
vomiting without any
fever or cold stage.
When the cold stage has lasted
for some time, flushes of heat come
on uneasiness of the stomach, increased sometimes so much as to
cause vomiting, and finally, the
duration of heat predominates,
and the second stage supervenes
with red and watery eyes, rest-
fulness, and thirst. The pulse
which was first feeble now be-
comes full and bounding. The
duration of this hot stage varies
according to circumstances,
finally a profuse prostration is
throughout over the body, when the sweat flows freely, the symptoms
outside, and the patient is soon entirely relieved. Intermittents
are treated for their strong tendency to recur; often put their
faith in constitutions for a long period, resisting every effort
to expel them, the quartains is most remarkable for this obstinacy.
I have known it to last for two or three years, and instances are recorded of its duration
extending to twenty years or more. It is probable that cases such as are seen in this country
would generally terminate favor-
able, provided that the patient could be kept beyond the further operation of Malaria, protected from wind and cold and well nourished. But possessing as we do a specific, the spontaneous cure for ague, there would be no sense in our allowing the experiment of a spontaneous recovery to be made or rather we would be reproachable, knowing that the complaint is more obstinate the longer it has lasted, and tends to the establishment of other diseases, we would be without excuse if we did not glut it as quickly as we can. The consequences of Intermittents vary with their mo...
ence & duration. In some localities, as on the coast of Africa, a malign-ant modification of this type of fever is met with, which often proves from the fatal by the congestive determinations which affect the vital organs. Examples of this sort are met with in tropical climates, but rarely. Prognosis is generally favorable, with some allowance for their tendency in all seasons & climates to obtinate involution, and in hot and moist climates to malignant violence, violence of determinations to important organs, in the first stage as to the head and stomach, are
unfavorable signs. But in cold countries, such as ours, it is almost always favorable. It will be modified by the previous condition of the patient. When it attacks very old or infirm persons the supervision of the ague may destroy him, or while there is any organic visceral disease. But to persons of good health before the setting in of the disease, we may confidently promise a cure. In all countries quanutins are cured with more difficulty than other Tartars' Quolidianians. Their needs very little preparation of the patient, before administering the substance which is to cure him, and which is familiar with most persons known as American bark.
or its active principle as presented by the root of cinchona. The old prac-
tice was to wait a few returns of the paroxysms, until the supposed
matter had been expelled by vomiting or purging. There is a very simple
preparation which the most of
Physicians use in Virginia and
I have used it frequently with good
success. The prescription generally
is four or five grains of Calomel
with eight or ten grains of Nux vomica
or Jalap at bed time, and commen
t with the genuine the next morning.
The patients are cautioned to not
expose themselves to wet or cold
and wear flannel shirts.
Treatment: the object of treatment during the paroxysm, are to allay the uneasiness sensations of the patient and shorten the fit, and to avoid the danger which sometimes may arise from intense internal congestion. To abate the cold stage, to diminish the vascular excitement during the hot stage, and to induce its prompt resolution by vomiting, are the objects of the practitioner. From time immemorial it has been supposed that the history of the paroxysm and its results would bear a direct relation to the intensity and duration of the rigor. Hence the anxiety to find
and put both at once, before it has brought on the internal atheri- 
izations, congestion and de-
ility. To effect these purposes, it is usual to begin at its earliest 
commencement, with the admin-
istration of stimulants, both externally 
and internally. The patient should be wrapped in blankets; bottles of 
hot water hot bricks are put to the 
the extremities; warm poultices applied to the epigastrium, 
warm drink should be allowed 
as freely as the stomach will bear. Sometimes they might be 
beneficially mixed with stimulants. We should thus restore the warmth.
of the surface, relieving the heart and head from that oppression under which the always labor. Opium is highly recommended by some authors, as being an expectant remedy, during the cold stage of an intermittent. It is most generally combined with chamomile. It always produces a pleasant effect, without fruitful symptoms of any kind, it will sometimes bring on a milder hot stage. The domestic custom of administering an emetic before the expected paroxysm, may prove eminently adapted to some cases.
Connected with great deprava-
vation of the bowels, which
are generally shown by a foul-
tongue, bad breath, oppression
of the stomach, &c, Theae is
highly esteemed in some, if it
is not sufficiently active it may
be combined with some other therapeutics.
When the hot stage appears a
different plan is thus resorted
to, the head is kept cool by cold
apprecitations, the thirst relieved
by refrigerant drinks, ice may
be taken if there is any irritation.
In cases of more violence one
may be called on to interfere
more actively, such as mumia de-
Terminations to the head or chest, the pulse hard and full, there may be advantage in blood-letting; this generally found in robust subjects. But it must be resorted to cautiously, if at all, a cathartic sometimes is very good. Some active one. If there be any disturbance of the stomach, a mustard plaster would be found good. Cold applications to the head may be resorted with success at this period, or cold bath. It relieves the burning heat of the surface, calms the disturbed stomach, and quiet the throbbing head. This is not adapted to old inform
people and should be avoided if likely to do harm whereas these is pulmonary affection or diarrhea erupting. Opium has been recommended in the hot stage of Intermittent; the best formula is dose powder in combination with two grains of Cadmium or Rhebark to prevent constipation, if there be any tendency to inflammation especially to the head this must be avoided. The next to consider is the treatment during the Intermittent, a great many varieties are laid down in the books as preventative of Intermittent; but there is one far preferable to any that has ever been
discovered, that is Cinchona or Peruvian bark. For many generations
back, the reliance of the profession has been chiefly placed upon the admin-
istration of this medicine, in some mode or formula. The discovery of
Cinchona is one of the best laid
down in the materia medica for
the cure of Intermittents. The use
of the bark in some cases is ab-
dotely prohibited, and limited by
a variety of conditions. Cinchona
is objectionable owing to the large
quantity that has to be given to pro-
duce the desired effect. If there is
any engorgement of the Spleen or
Liver, a slow and gentle muriatic
course will be useful, after these ob-
tacles just mentioned are removed,
and a perfect aphyxia obtained,
we may expect the true benefits of
quinine, since the discovery of
an active principal of Chinchona,
quinine) and its extraction, which
may be safely pronounced to be the
greatest improvement in modern
pharmacy. The sulphate is general-
ly used owing to its smallness of dose,
certainly, and uniformity of dose, &
freedom from offensive quality, except
few bitterness. Sulphate of quinine
may be given in solution or julep
with a few drops of sulphuric acid
two to four grains is generally given,
every three or four hours until from one to twenty grains may be taken
during the intermission. Under some circumstances it may be necessary
to administer the whole dose, either immediately before or after the paro-
ype, for instance when the inter-
mission is short as in the quotidian.
It is best however to introduce it
into the system gradually. The
remedy should be continued some
days after the attack, owing to
its tendency to recur. If quinine
should be rejected by an irritable
stomach, it might be injected in
the rectum in combination with
bland amnines, sometimes it is applied
undermically to the epigastrum, the infusion of Cinchona is still prescribed, now and then in combination with Camphor and Cor-suntaria. It is said to be very grateful to patients, and found to be a diaphoretic. If genuine it should not be at hand, or a very high price, as it is in some parts of our Country, there is offered many substitutes, of which willow bark, citric acid, Chloride of Soda, among the whole no domestic remedy enjoys a higher reputation than tincture of sage, many cases in our low countries have been promptly cured with it. Sulphur is also as well known remedy
for intermittent fever, especially when
the bark is contraindicated, notwithstanding the employment of many
valuable and efficient remedies, the
patient will still sometimes continue
to suffer, if not as regular as at first,
perhaps at distant intervals, from
the recurrence of pharyngitis of his
obstinate tormentor. When this has come
nothing will remove the disease short
of an alteration of the patient's habits.
He must change his place of abode
for sometime, let the patient take a
journey from home, or visit some county
distantly by sea or voyage or some place
near the Ocean.

Respectfully,

Nathaniel S. Smith
The disease he believes to be the cause of death is not clearly described. Dr. J. A. writes, "The disease was originally supposed to be a form of the young child's condition," and suggests that the child's condition may have been similar to that of the child in the other case. He also mentions that the disease was found in the case of the other child, and that this might be a sign of the disease in the first case. The disease is not described, but it is suggested that it may be a form of小儿麻痹症.
the adult; it may come six, fifteen
after birth, or more generally it does
not occur until several days after
it is born. The first thing that is
noticed is that the child cannot open
its mouth when attempting to take the
mother's breast; the jaws are slightly
open, the corners of the child's mouth
drawn downwards and backwards,
giving to the child a peculiar expression,
as stated by Dr C. West, to be symptomatic
of the disease.

Paroxysms, now generally seen in,
the child is convulsive; with its little hands
clenched, and thumbs drawn in the hands;
while its feet are flexed on the ankles;
the body being bent backwards.
Thus convulsions continue without cessation, until at last the little suffers in exhaustion, and dies during one of them or sinks into a comatose condition, and expires. Recovery is very rare in the disease, as it attacks children.

**Causes.** As already stated, the disease, as we have it, in this country, nearly always is in the traumatic variety; so that the cause is nearly always a wound; a blow, that existed prior to the tetanic spasms; though with this, I would think a peculiar predisposition must exist, as many wounds worse than those that produce the disease, are of daily occurrence, and no serious consequences follow them.
It is supposed, that a low and diseased state of the system, is more apt to produce the disease, than in the robust; though it is noticed, that those affected with the hereditary variety, are often of the most robust character, males are more subject to it than females; but this is on account of their being more exposed, to the exciting causes than the weaker sex.

Whether the wound is belling or severe in its character, is of no consequence; sometimes the smallest wound will produce the tetanic spasms; as for instance a pin's scratch, has been known to produce the severest form of the disease.

A great amount of argument, has been used, to show that a peculiar con-
ditions of the wound, must exist; for in
stance, it is said by some, that no inflam-

mation must be present in the wound;

others again, that a peculiar discharge
from the wound; as an ichorous discharge,
will produce it. I think neither of these
hypothesis, have any bearing in fixing
the cause of the disease; a certain part
wounded, seems more liable to produce
it, than any other, as for instance the
wounding of the palmer muscles of the
thumb is very apt to excite the disease,
when in a person of the peculiar pre-
disposition; what this predisposition is,
in what it consists, is I suppose, like
all our many of the nervous phenomena,
not easy of explanation. I have no
doubt, that many physiological researches have been made; for the purpose of making it well understood, but more, it seems have placed before the profession their opinions or their discoveries, in regard to it; at least not to my knowledge. Various, no doubt, are the hypotheses that have enlisted the intelligent minds of great men in the study of nervous phenomena, yet as it were driven into the deep, unfathomable mysteries of the nervous system, we search in a misty darkness, with but a faint glimmering ray, that soon seems again to mingle with the unknown.

Ensnared in darkness, to a great extent, seems to be the fate of all pathologists; until the bright and glorious
advancements of physiological science, which are now so fast becoming simple to our views, may illuminate our mind with a better understanding of the deep, dark, and impenetrating phenomena of the nervous system.

Until then we search in vain, hand in hand, step by step, must these two studies proceed, and if favoured with but half the success, that has been given them within the last century, we will stand almost masters of nervous phenomena.

But to proceed, this peculiar predisposition must exist, that the litanics spasms, may present themselves in their particular way, characteristic...
of the disease.
Among other causes, may be considered the temperature of climate; being as already stated, more prevalent in the hot, then the temperate climate; and more among the low, poor, and uncleanly population, as for instance the negro of the South, and the "Fisimus nascentium", and the ill-fed and poorly clad, of the European cities.

As has already been stated, this variety of the disease "idiopathic," seldom if ever is found in this country, or any other temperate climate.

Exposure to cold, damp night air, during warm weather, is given as one of the causes producing the disease; certain
poisons, as any homie, may produce the
tetanic spasms, which bear the closest-
resemblance to the disease. It has in-
fact been known to occur from cutting
a corn, the stroke of a whip lash, from
the operation of cupping.

Of the wounds producing the
traumatic; those produced by impru-
dence are more serious, than other in-
juries as penetrating wounds of the foot by a nail,
which often occurs, and is more likely to
be followed by the tetanic spasms; owing
probably to the wound being in a part com-
posed mostly of tendons and sheaths.

The tetanic spasms do not occur at
a distinct period, after the wound; some-
times it has occurred almost immediately;
it most generally supervenes between the third and fifteenth day, or about the second week, is the most common time. It is said that the longer the tetanic symptoms are delayed, in making their appearance, the milder will be the disease.

The idiopathic generally comes on sooner than the traumatic, but is longer running its course.

**Pathology**

The greatest obscurity exists, as regards the pathology of this disease, but I think it is no more so, than in many other nervous diseases. Some authors state, that no anatomical lesions are ever found, while others again, always find...
Inflammation, at their autopsic examination; this assertion has been the cause of the great
est amount of harm to the patient; as it is well known, but a few years ago, when "the walled vitality, restored, was understood by inflammation;
the great panacea, blood-letting, was of course instituted, and a fearful am-
ount of the vital stimuli; the life of man, was removed; was removed; follow-
ed as might well be supposed, by a great mortality. In children an effusion of
blood around the theca of the cord, with congestion of its vessels, and its membranes, has been found in every instance by a German writer,
Dr. Weber of Kiel. It was thought that
this was on account of the position the child occupied, resting on its back, but this gentleman placed numerous patients on their faces; before they died, and in other positions, we found the morbid condition in every instance.

"Dr. West, agrees with him on this point, and says "I very frequently found great fullness of the vessels of the cord, and a gelatinous matter, which was frequently tinged with blood, effused around its theca." Deposits of earthy matter have been found pressing on the arachnoid membrane, but this not being always present is not pathognomonic of the disease. The nerves leading from the wounded part are found lacerated.
and always congested. Dr. Erickson, in his work on surgery, says "this morbid condition, I have never found wanting." A degree of congestion of the brain has often been found, but this is often noticed in other diseases, and in fact might only be cadaveric. As already stated, our pathology cannot be supposed to advance or increase, while we remain so ignorant of the physiological phenomena of the nervous system.

**Diagnosis**

This disease, when well marked, is not likely to be confounded with many other diseases, though there are some that simulate its symptoms; some
Poisons in their effects, might be mistaken for true tetanus; and one particular that is very much like it, I have reference to poisoning by strychnine. It would be well that a distinct line should be drawn between these. We well know that this poison is used for suicidal purposes, frequently, of late years, therefore a thorough knowledge of the different symptoms, as they show themselves, in the disease and in poisoning, should be attained.

The spasms from strychnine do not supervene upon exposure to cold, or climatic influences, but follow shortly after the drug has been taken; they come on suddenly, and with great violence.
afflicted with greatest intensity, the muscles of the trunk and spine, the opisthotonos coming on very soon after the spasms, which does not occur in tetanus. Especially, the stiffness of the jaws that comes on so soon in tetanus, is not perceived at first in poisoning by strychnine.

Dr. Todd, has described the symptoms so accurately, in a few words, that I beg leave to introduce them here:

"As regards the tetanic state from strychnine, — The rapid super-renition of tetanoid convulsions affecting chiefly, and with most intensity, the muscles of the trunk and spine, causing an active and violent opisthotonos rarely met with in tetanus. A rigi
and tetanoid state of the muscles of the lower extremities, with somewhat less intensity than those of the trunk; the limbs extended and the feet drawn powerfully inward by the action of the tibiales postici muscles. The upper extremities also, but in a less degree, and the hands semiflexed.

The trismus existing only imperfectly, facies tetanica very slightly or not at all; swallowing imperfect, but the mode of deglutition peculiar, the patient snapping at the liquid offered, and gulping it down with an effort, in a manner very similar to that in which hydrophobic patients swallow. The attacks of opisthotonos frequent, seemingly exquisite, painful, and ushered
in by a cry, more or less loud.

"As regards tetanus, the symptoms coming on gradually, and the trismus the earliest, the most prominent, and the most important one, the facies tetanica a very characteristic symptom. The attacks of opisthotonos less frequent, less extensive, and less severe, than in poisoning by strychnine, the extremities the last part affected, and suffering much less from the tonic spasms than other parts.

Deglutition slow and difficult, and sometimes impossible, owing to the spasm-atodic closure of the mouth."

From hysterical convulsions, or tetanus as it has been called, we would
distinguish the disease, not only by the age and sex of the patient, but by the absence of pain, and the intermission of the muscular rigidity; also by the spasms being of the tonic character and from tetanus in fact, by the treatment that might be threatened, as for instance, the pouring of cold water on the patient, threatening the application of the actual cautery, or better still, the application of it, in cases where we linger in doubt as to its true character; for if true tetanus, and we should apply it, we would do no more than has often been done, and recommended by writers; if hysterical and is proven by it, we can only feel too glad that we found
so active a remedy.

With hydrophobia it seems to be more closely associated, by its symptoms; so many that are almost allied to those we have in tetanus; yet a difference exists, and this difference, well marked, I think, if properly drawn. Dehydration in tetanus is difficult, in the other impossible; for swallowing or attempts thereof exciting the most distressing dysphagia; the fothing at the mouth, the vomiting, the very great sensibility of the surface, liquids if offered, or heard by the patient, causing paroxysms; also the clonic spasm, the choking sensation about the throat, the fierce manner and maniacal paroxysms; these all show a marked difference of the two.
Prognosis

The prognosis is exceedingly unfavourable; in nearly every work on the subject the writers look upon it as a disease almost incurable; unless the powers of the patient are enabled to withstand its terrible course.

I think the prognosis has been considered more unfavourable than it really is, for books and the experience of some, show us many cures; though I do not desire to consider it of favourable prognosis; for we may well suppose, that many of the fatal cases are never reported; neither do I think we should despair, for enough recoveries have taken place to give us inspired hope, to expect a
In an Inaugural Dissertation
On Gun-shot Wounds
Submitted to
The Provost, Regents, and Faculty
of The
University of Maryland
For the Degree
of
Doctor in Medicine
By
James M. Carter
of Maryland
Baltimore, February 14th
1864.
Gun-shot Wounds.

Gun-shot Wounds are lesions inflicted by firearms of any description whatever. The range of severity of these injuries is considerable, extending from a simple flesh wound to the complete destruction of one or more limbs, or their entire separation from the body. When a ball has passed entirely through a part we observe two orifices, that of entrance, which is
smooth, round, and with inverted edges and more or less simple reddening of the parts around. 3. That of exit, in which the hole is much larger, the edges everted, and the surrounding soft parts blackened, bruised, or purpured. When a ball passes swiftly through a part, little or no pain is felt at the time, on account of the instantaneous suspension of nervous sensibility. Portions of clothing, fragments of bone, pieces of money, etc., may be carried into a wound by a ball. Gau-shot wounds are commonly attended by more or less haemorrhage and constitutional disturbance. In the case of the bleeding, if a large artery be wounded, the blood escapes in considerable quantity, and peevish, notwithstanding any pressure which may
be brought to bear upon it. With regard to the constitutional disturbance, it may be stated that in general it depends upon the importance of the part wounded, the extent of damage inflicted, and the habitual strength of nerve of the injured person. If the lesion be a very severe one the patient suffers from vomiting and faintness and has an alarmed expression of countenance, together with anxiety of mind and confusion of ideas. Besides these phenomena his limbs tremble to so great a degree that he can neither stand nor walk without support, and the general surface is bathed in sweat.

The most curious and at the same time the most interesting circumstance connected with the subject of gun-shot
wounds is the course which the ball takes and the facility with which they may be diverted from their track by the slightest obstacle. Thus a sharp process of bone may cause a ball to split one piece falling out, and the other probably being driven in, causing serious mischief. Kemen relates a case of this sort, in which the patient died ten days after being shot from haemorrhage from the sinuses of the left internal jugular vein, where one piece of a split ball had lodged and caused ulceration. Likewise any slight obliquity of surface, or modification of density in the wounded parts may cause considerable divergence of the ball. For example a ball may strike one side of either of the three
great cavities of the body, and emerge at a point exactly opposite, of course leading to the conclusion at first thought, that the missile has passed directly through. But not to conclude too quickly, let a careful examination be made. If the ball has passed through, there will be certain manifestations, which are pretty nearly unmistakeable: as in the case of the chest, emphysema and pneumophthisis; together with great dyspnoea and anxiety, flying flustered pulse, cold extremities, &c. In the case of the stomach, vomiting of blood, pain and other general symptoms. If any of these appearances be absent we conclude generally, where there are two openings, that the ball has passed round under the skin. In this case the track of the ball, will be made manifest by a
dusty red line, or wheat on the skin, or by a peculiar emphysenmatus cracking. It may be stated lastly in this connexion that half a dozen orifices may be made by the same bullet.

Spent balls. Very serious and often fatal injury is occasionally inflicted by what are denominated spent bullets. In this case, the missile has parted with a considerable amount of its original velocity, and strikes the part obliquely, or rolls over the surface. The integument may be intact or but slightly bruised while the deeper seated tissues are completely destroyed. The injured person is severely stunned, and there is loss of motion and sensation in the part, and for some distance around it. A feeble inflammation action is set up.
which is soon followed by gangrene.

Lodgement of Balls. This is of course a matter of much interest to the patient and his friends, although the lodgment may not be productive of serious consequences, especially if the ball be lodged in the soft parts, and there is no pressure upon vessels or nerves. Some knowledge may be obtained on this point by considering in the case of two openings, whether they were produced by the entrance and exit of one ball, or the entrance of two. It is also important to ascertain as nearly as may be, the positions respectively of the wounded person and of the party inflicting the injury.

Again, the same orifice of entrance may be produced by two bullets
One of them passing out, and the other deviating from its track and doing serious internal mischief. The velocity which the ball possessed at the moment of striking the body, had considerable influence upon its lodgement.

Progress and Results In from twelve to twenty-four hours after the reception of the injury, inflammatory action is set up. The neighboring tissues are swollen, stiff and painful, and the wound itself exudes a small quantity of reddish serum. About the fourth or fifth day suppuration is established, but is limited by the effusion of lymph around the wound. About the seventh day, the tissues which have been destroyed by the severity of the concussion begin to separate, and the lungs
is cast about the fifteenth day. This is a moderate and ordinary inflammation, the tendency of which is to recovery. On the contrary, the local and general symptoms will be much aggravated, if the patient has been exposed to great vicissitudes of temperature, or has been guilty of excess of any sort, before or after the injury. The suppuration is greatly delayed, the cure protracted, and the result a limb disabled by muscular contraction and adhesion.

Hemorrhage as a result of gunshot injuries commonly takes place under three conditions: 1st, from immediate destruction of the injured parts; 2nd, from excessive inflammatory action; and 3rd, from division of
large arterial or venous trunks.

The third variety of mortification
is indicated by its commencing
in the extremity of the limb, and by
presenting the two varieties of dry and
humid gangrene. This form of mor-
tification is of rapid progress, and
is generally fatal in its consequences.

Secondary Hemorrhage. As a
consequence of gun-shot wounds.
may occur in four ways: 1st from ex-
cessive arterial action, resulting in
the displacement of coagula. This
accident when it does occur, usually
takes place in the first five days.
2nd: By the separation of a slough from
a large artery. This may happen any
time from the fifth till the twen-
tieth day, but it is rare.
By progressive destruction, or ulceration of arterial coats. This also
is rare, inasmuch as the coats of arteries resist ulceration for a long
time. 4. The most common variety is ushered in by pain, heat, and
throbbing of the wound, and of the surrounding parts. It is almost
certain to follow any excitement of the circulatory system. Excesses
of any kind whatever, are improper and dangerous. The haemorrhage
consists in general exudation from a granulating surface.

II. Treatment of Gun-Shot
Wounds. In simple cases not much
treatment is required, it being neces-
sary merely to sponge the wound
clean, and after the cessation of
ordinary bleeding, to apply a light pled-
get of lint, secured by a strip of plas-
ter, after three or four days, when
these primary dressings have be-
come hard and stiff, they must
be removed, after being first well
sponged with warm water, to fa-
cilitate their removal. Then light
water dressings may be used until
the suppurative stage has been es-
blished, at which time the
cloths should be wetted with warm
water. Poultices are improper, dirty,
and troublesome. If the tissues
surrounding the wound become
very tense and painful, or if pus
has formed and is likely to burrow
the wound may be freely dilated.
In all cases, though it may be dea
shown that the ball has passed out, yet there may be clothing or other foreign matter remaining, and an examination should be made accordingly. More especially, if there be but one opening. If the ball or other foreign body is within easy reach, it may be removed by forceps, just dilating the wound if its calibre on account of tissuefication to will not allow the free exit of the substance. If the body can be detected just under the skin, an incision may be made for its removal. But should the substance be difficult of access and its lodgement is not likely to be followed by serious consequences, better let it remain.
as a failure in the effort at extraction, would undoubtedly have a worse effect on the patient's mind than the lodgement of the foreign body would have upon his physical system.

When balls lodge in the substance of bones they should be removed; otherwise they will cause caries or necrosis.

With regard to the treatment of secondary haemorrhage the first three varieties named require ligatures. The fourth is to be managed, by perfect rest, rigidly low diet, cold applications and pressure. Particularly if any of the spots must be cauterized with laq. Nitratis. The general management will of course be regulated by the temperament of the patient. Finally, in the treatment of Gun-
Gunshot Wounds

Shot wounds it may be necessary to resort to amputation in order to save the life of the patient. When amputation is proper, is a most grave and important question to decide. Amputation is a great Cyrus, and some of unhappiness to the patient and his friends. However, the operation may be indispensably necessary to preserve life, and if so, some points are to be considered. 1st would the attempt to preserve the limb endanger life. 2nd. Will the limb be of any use, if it is saved. 3rd. The patient's habits are to be considered. 4th. The presence of previous organic or functional disease. 5th. The accommodations at the disposal of the patient.
The operation if finally adjudged to be necessary, should be promptly, but is performed within the first forty-eight hours after the reception of the injury, as patients will bear an amputation better after full reaction than after having been submitted to the trying ordeal of five or six weeks in an hospital. Another important point before operating, is to ascertain the whole amount of injury.

Rules for amputation 1st When a limb has been completely shot off, the stump is to be amputated.

2d Amputation is demanded in fracture of the femur, with division, partial or complete of the femoral artery vein or sciatic nerve.
3d. Injuries of the knee or ankle joints, or an extensive fracture of the tibia with division of arteries, but not mere laceration of the calf of the leg. 1st. The arm should not be amputated unless great damage has been done to the wrist joint, or to the humerus, with division of vessels and nerves. Such injuries generally demand amputation.

In conclusion, gentlemen of the Faculty, allow me to express my sincere thanks for your kind and assiduous attention to me, while yet a medical novitiate, and to hope that your labours may be abundantly blessed to future candidates for the honours of our Alma Mater.
An Inaugural Dissertation
On Fractures
Submitted to the Examination
of the Provost, Regents, and Faculty
of Physics of the University of, Maryland
For the Degree of Doctor of Medicine
By
James A. Price
Anne Demini
1864
Fracture is a solution of continuity in a Bone. Bones derive their function by their physical properties, not from vital properties, they derive their strength from earthy and animal matter, and their elasticity from gelatin. Bones become easily broken in Cancer, old age and Sorojula. Gran-Strip fracture is when a line is partly broken there occur to young persons. Fracture in an old person is entire. Long-Bones are more apt to fracture than short fracture and from direct or indirect violence as a bone being cut and striking one of the extremities which will cause fracture at the point struck, indirect when a force is brought to bear upon both extremities of a bone when it will fracture remote from either extremity as coming down with great force.
upon the foot is apt to fracture one or
more of the bones of the lower extremities or
falling upon the shoulder, and fracturing
the Clavicle, bone may be broken by mus-
cular contraction as the Sternum by the
contraction of the Recti Muscles, the patel-
la by the violent contraction of the Quad-
driceps Muscle or by considerable muscu-
lar effort in Strained Subjects.
Fractures are Simple, Comminuted, Com-
mined and Complicated. Simple is where
the bone is broken without injury to sur-
rounding parts. Comminuted is where the
bone is fractured and Splintered.
Commined, is as railroads Car-wheel
sparking over limb, fracturing and lacer-
at ing parts, it may become Comminated
by Closure and Cure of Wounds.
Complicated, is fracture with dislocation.
and laceration of Muscles. Here, too, of this occurs in many ways, we have effusion of blood and more lip inflammation. Simple fracture may be oblique or longitudinal. If oblique and part of bone is apt to slip over the other, longitudinal is where it extends some distance up a line and then slaps off. In fracture the pericardium is stripped off to some extent floating in the extravasated blood. The first few days after fracture is a period of repair little or no change taking place except the effusion of a small quantity of lymph of serum and the absorption of extravasated blood. The blood is absorbed leaving the fibrous which forms the provisional union. Callus is formed around which is the external Callus ring if then there is a
Bone formed in the Centre of each part, which is the Central Split of Old Surgeons, when direct continuity is restored, this tumor is absorbed, in passing of struma, diathesis, or general bad health or patient may exercise part or necrose may take place if the formation of provisional tumor will be frustrated in these cases we have a false joint which occurs mostly in the Humerus which shows the tumor is principally from insufficient Support. Symptoms and Signs of fracture, the limb is very seldom lengthened, almost invariably shortened, deformity is not so obvious when near a joint, every fracture has it characteristic deformity if thigh bone the limb will be contracted and the toe turned, and another sign is crepitating which is quite perceptible.
Femur Crepitation is not as manifest near a joint as have Viscus Crepitation in Rheumatids affecting also Crepitation of joints when the Synovial Membrane has become dry and we at times have no Crepitation, effusion of blood is another sign. Soon after fracture, if fracture of radius patients cant Supinate & pronate as those Muscles have lost their use, if Humoured Cant raise arm, if Femur Cant raise lower extremity. Long-bones are more prone to fracture than any other, the Clavicle is broken more frequently than any other bone, next the fore-arm bone, next the thigh, next below the knee, next the ribs, at times it dont require any splint as in fracture of the Neck of
the Radium which will do better by rest
and quiet than by splint; unless it
is a young patient then put an angular
splint. Instruments for adjusting
fractures are splints made of various
material those mostly used are of wood
and metal.

Fracture of the Zygomatic Arch is
broken by direct violence; it is very strong
being supported by the Temporal and
Masseter Muscles. This fracture is
attended with effusion of ecchymosis
diagnosed by ordering patient to open mouth
then search for fragments there will be
but very little displacement.

Treat—by keeping patient in repose.

Fracture of the Arch of the Orbital is
broken at times and will involve the
nerve passing to the eye which may
Cause Amusive, the fragments will fall. Treat, by replacing and saturating.

Fracture of the Malar-Bone is masked in at times by false & may be broken from superior maxillary, orbit of the eye and temporal bone. Pressure in the proper treatment is nothing it will cause, but little deformity.

Bone of the Nose - This fracture generally occurs from direct violence driving the bone into the cavity. Causing great effusion of blood. Diagnosis by difficult breathing through nostrils from the effusion. As one would suppose. Nose mashed when such is not the case.

Treat - by manipulating carefully with fingers & when you find any displacement of bones adjust them from.
within outwardly with a female Catheter, if nose is mashed over on cheek, treat by placing patient’s head against wall and press the nose up which will generally require considerable force then replace stone with Catheter as before.

Fracture of the superior maxillary is of seldom occurrence but do occur at time from the kick of a horse, may be broken through to orbit or through nasal passage, in this case we generally have much effusion. Treat by placing hand in mouth and adjust as well as possible and bandage, but little can be done to any great advantage in this case though nature does much towards removing the deformity this is generally
by complicated with fracture of the inferior maxillary, when the alveolar processes are broken off with the teeth adjacent teeth and process, then bands of jaw together.

Fracture of the inferior maxillary may be fractured by being caught and pressed together, this fracture will generally occur at the symphysis, though this bone is generally broken by direct violence as falls, kicks, etc. it will then be broken between the symphysis and angle, this is generally a comminuted fracture and at times both sides of the jaw is clift off obliquely and chin forced back.

Fracture of the condyle, diagnosis placing fingers on the condyle and order patient to open mouth when you
will find the fractured Condyle will not move, in all fractures of the lower jaw the part fall in therefor the indications in the treatment is to keep the fragments outwards by putting a piece of pastboard under the jaw being carefull to have it wider than the jaw and bandage with "Barlow's" Bandage described by Dr. Wright, for 231 Fig. 80, the most difficult to treat is fracture on each side of Symphasis.

Treat by pinning out the chin to its proper place and then adjust a silver arch upon the inside of jaw and fasten to teeth with fine wire then put Comprepped as a ball of lint and Splint on that then Bandage and keep head pref- ed well forward by pieces made fast to night-cap and then to some part of
Clothing or to roller-shaped round body.
Fracture of the Clavicle is mostly broken by Cauter-Strokes and generally happens to children by falling out of bed, on the floor, it often occurs and is not recognized, and the child gets well through the efforts of Nature; this bone is most liable to fracture about the middle near the Curvature it may also be broken either extremity; when broken in the middle there is greater deformity, not so much and at times scarcely any. When the fracture occurs near either extremity the moment the Clavicle is broken the movement of the Shoulder latterly ceased; this bone will unite under most circumstances, though in some cases with considerable deformity. Great, the great object in view is to
apply an apparatus that will take the place of the office of the bone, making use of the arm as a lever, put a bolster under the axilla then flex and prop the elbow down to the body and apply bandage first around body several times then carry the bandage obliquely across the opposite shoulder the arm being prepped up by an assistant, the shoulder will be higher than the other then put on a Sling to Support the Wrist, deformity will occur under the best treatment.

Fracture of the Scapula, this bone is not often broken, generally broken from Cart while packing over it there will be great effusion of blood and at times it is difficult to detect the fracture.

Treat- apply bandage and Keep
Fracture of the Acromion—occurs very
rarely, because it is put upon a Cushion
of Muscles, if it is at times accompa-
nied with fracture of the Clavicle, the
deformity will be the drooping of the
Shoulder and the rotundity of the
Shoulder will also be lost; it is de-
tected by raising the Shoulder.

Treat same as fracture of Clavicle.

Fracture of the Coracoïd process—some-
times happening by an indirect blow,
the Aicular bone driven against
it, the deformity will be. Straighten-
ing the arms and the Coracoïd will be
much lower than usual; being pulled
down by the Coraco Brachialis and the
head of the Biceps Muscles, and
when the arm is drawn up it will
TREATY, by bandaging the arm to the chest, flex the elbow and keep the patient at perfect rest.

Fracture of the Neck of the Crocodile: very rarely happening and difficult to recognize.

Fracture of the Forearm: same as fracture of Warius.

Fracture of the Humerus: this bone is very much exposed to injury, it is often broken by counter stroke, also by direct violence and is very frequently fractured.

Fracture of the Anatomical Neck: is broken by falling on elbow and the neck is driven up with great force, the deformity will be in the shortening of the limb, and the tubercles will ascend and the head of the bone will settle down into the Apillae.
it's recognized by pulling the arm down and pushing the head of the bone up when you will hear Crepitus, restore the shape and form.

Treat adduct the arm a little from the body so as to relax the muscles then put a wedged bulb or in the axilla put the small part of the bolster under the axilla so as to carry the elbow out and relax the muscles then carry bandage around the arm and body several times and support with a string. The union will be cartilaginous.

Fracture of the Surgical Neck, fractured by the same kind of violence the deformity will be the lower fragment drawn inward and the upper carried outward the bone is shortened and is
Easily recognized

Treat by thick edge of bolster in ante-cubital and bring the arm gently down by the side and apply Splint of binderboard notched so it will go over the shoulder somewhat, bandage the Splint then carry the bandage around the trunk.

Fracture of the Middle of the Humerus, the upper fragment will be drawn inward and the lower outwards.

Treat: make use of a long splint let the splint rest upon the acromion and bound by roller and Keep in easy posture, with elbow in a Sling.

Fracture of the lower Extremity, they are inflicted at times by falling on the elbows and also by direct violence though more frequent the
result of falling upon the hands when we very often have the outer Condyle
Cleft off, injuries of the Elbow joints are very difficult of recognition and also
very difficult to manage one bone may be broken and the other deslocated.
Deformity the Condyle will be carried backward and the other fragments
drawn down then will be but little. Shortening not easily recognized until
hold of the hand and put your hand in the Elbow and make traction when
you will hear Crepitation and the natural form of the joint will be restored.
not so in a deslocation the deformity will be greater and the limb more short
ened and if you attempt to flex the patient's arm in fracture you will
succeed to a certain extent, but in
dislocation it will be suddenly checked
Treat.. apply an angular splint to
posterior part of arm and Camp up
in the inside
Fracture of the Radius a person
falling upon their hands the shock
is communicated almost entirely to
the radius consequently it is very
often broken, it may be broken below
its neck, in the middle or near its
lower extremity in fracture of the neck
the lower fragment will be drawn in
producing a tubercle the patient
Cannot pronate or Supinate his
hand There will be Crepitus and pain
Treat only use a Sling
Fracture below the tubercle, the
upper extremity will be drawn inward
by the action of the Biceps Muscle
you will recognize in the same manner as the last, and the treatment is the same. 
Fracture in the Middle, the two fragments will be drawn inwards, there will be Crepitation, and pain Pronation and Supination will be impeded.
Treat, place arm in an easy posture, and apply Splints upon the anterior and posterior part of the arm should first wrap the Splints then apply bandage, never apply bandage to arm before the Splints as it may Cause Ankylosis of the Bone.
Fracture of the Lower Extremity of the Radii occurs more frequent than any other, not so easily detected and not so easily treated, falling upon the hand often produces this fracture it may be broken Transversely.
a obliquity which is very difficult to
determine, but it does not matter which
it is, in examining you will not always
hear crepitus, grasp the hand and
make traction upon it preserving its
position
Then use a slight angular Splint
upon the posterior part of the arm
and a straight Splat on to the anterior
part and apply Bandage.
Fracture of the Ulna generally frac-
tured by direct blow, but at times
by Counter Stroke when they occur
independantly of the radius they are
easily recognized, pronation and Supi-
nation can be accomplished as the pad-
sius is Concerned in this, incinate
your Finger between the bone and you
Can feel the ends rub against each
Treat, apply splints to the anterior and posterior part of the arm, the splints being broader.

Fracture of the Carpus—They are very rare never occur except by crushing violence as a railroad car, it will generally be necessary to amputate the part, being so disorganized.

Fracture of the Metacarpus—generally broken by a blow of the fist, you will find an angular deformity at part springing up, does not impair the use of the hand very much. Treat, put the hand of the patient upon a Shingle and Cut it out to the shape of the hand and a Camouflage upon the back, then bandage.

Fracture of the Jinning are to be
Treated in the same manner.

Fracture of the Spine - fracture of the 1st, 2nd or 3rd Cervical vertebra death results instantly, but lower down, the patient may live for several days but death will follow, almost certainly, the spinal marrow being injured at any point above the middle of the spine, death will generally take place in five or six weeks but if below the middle, the patient may live on for months and even years but always paralyzed in the lower extremities.

Treat all that can be done is to keep the patient upon his breast.

Fracture of the Pelvis - is exceedingly rare but sometimes happening, fractured by Countershoes or direct violence it is generally attended with great injury.
of the soft part the patient will be unable to accomplish any movement, there will be Crepitation and pain. Death generally follows.

Treat—by pulling a camphor between the leg and a bandage around the Pelvis, it is at times broken by crushing violence.

Treat—by encircling the pelvis with a broad bandage or a wedged shaped bolster under each side.

Fracture of the Humer— it is liable to be broken at the neck, the great trochanter or below the Condyle.

Fracture of the Neck— not easily recognized at first, old women are subject to this fracture it may be broken by Counter Stroke or indirect violence, the deformity is the foot.
Turned out and the limb shortened an inch or two, the shortening is not always at first, but will generally happen in a day or two; generally have Crepitation, but often not. The patient will complain of much pain; the Union is generally considered ligamentary; though Prof. Smith and many other eminent Surgeons think bone Union does take place; the patient generally walks very well. Treat — by the Anterior Splint and a Splint by the Side. Apply Bandage. Fracture of the great trochanter — difficult to recognize, you will find it a little depressed and the limb a little shortened. Treat — by perfect rest and the patient will recover with some shortening of the limb.
Fracture of the Femur below the trochanter - deformity we have by the action of the illuco muscle which passes down the thigh, the limb drawn upwards, the superior fragment would be tilted forwards and the lower fragment drawn upwards and outwards by the pelvic muscles (Dorsal Thigh, Glutei) this produces an angular deformity on the inner aspect of the thigh.

Treat - should raise the limb and make traction thus bringing the fractured extremities of the bone into apposition then keeping the leg flexed in the thigh and the thigh on the pelvis you sit astride the offender muscles and adapt your splint (the anterior splint) and apply
Swinging up the limb, with a slight obliquity of the Corde in order to keep up the Counter Extension and the patient will do well.

Fracture of the Middle of the Femur.

In this case the foot may be turned in or out and there may be Shortening as in the fracture just mentioned, this is also in most cases an angular deformity on the outside of the thigh, which is caused by the Contraction of the adductor Muscles, the Adductors being at the same time lax.

Treat - make traction to counteract the parts for the limb, and apply the anterior splint.

Fracture of the lower extremity of the Femur - in this case the lower fragment is tilted backward into the popliteal
Replace by the action of the gastrocnemius muscle, the upper being directed forwards by the action of the Tensor Vagina and other muscles the limb is also shortened by its being drawn upwards by the Quadriceps muscle.

Treat - make traction to conduct the part also of raising the knee, then lay the gastrocnemius and flex the thigh upon the abdomen to relax the quadriceps and thus the fragments fall readily into place then keep them so by adjusting the anterior splint and bandage or by the use of "Sir Chatts Bell" endless plane. the anterior splint is however the most simple, easily applied, and most comfortable to the patient and therefore better.

Fracture of the Condyle - in this case
The condyle either the external or internal is cut off obliquely, the bone being somewhat weakened here by the deep notch between the condyles forming a kind of neck to each; a perfect union will not be accomplished in this case for two reasons, the joint is concerned and is constantly bathed by the Synovial fluid and the parts are also cut off from any vascular aid by the surrounding tissues and by its capsule.

Treat—flex the leg on the thigh to prevent the action of the Gastrocnemius Muscle, which is connected with these parts and apply the Splint and Bandage. If fracture of the internal condyle makes the patient what is termed Knob-Kneed and if fracture of the external condyle makes
him bandy-legged this being due to an imperfect Union—most people expect from Surgery perfect results which is absurd, you must therefor disabuse their minds of Such a view, explaining to them that there are some injuries that no art can entirely overcome if it was in the Surgeon's power to reach the bone with his hands and adjust the parts and keep them so then we might have more perfect results but even then there are other arbitrary circumstances arising sometimes, then for persons should never expect what is unreasonable.

Structure of the Patella—this frequently arises from muscular action the patient is in danger of falling backward and he makes a violent
muscular effort to save himself thus
the Quadriceps and their Ligament are
put violently upon the Stretch, and the
Patella is Snapped; the action of the
joint will be interfered with; there will
be termination and you may perceive
the the nature of the injury from the
depression at the point, the upper
fragment being drawn up by the
Quadriceps leaves a Gap between the
fragments. In many Cases there
will be ligamentous Union there being
no deposition of opaque Matter
Treat the Leg should be extended
on the thigh and the thigh on the
in the Pelvis thus the Quadriceps
will be relaxed, then place a Compreh
or roller above the upper fragment and
make traction downwards to the Anterior
Splint having been adjusted apply
bandage in this case the Splint
should be straight having no angle
and the Curdo should not be twisted
instead of obliquely as in the former
Cases

Fracture of the Leg: This is often
caused by a person lighting from
a height upon his feet the shock
and Counter-stroke be communicated
to the Tibia and it gives way and
then the Fibula. Sometimes either give
way independently of the other, this
is generally by a direct blow, as of
a Rock or falling from a height or
Carriage and striking the bone with
force. The bones when broken by Counter
Stroke is almost always an oblique
fracture, when by a direct blow it is
generally transversely it may also be
transverse fracture when broken by bend-
ing or springing of the bone, when
the Tibia is at an acute fracture there is
not always Crepitation to guide you
and there is no great deformity the
patient cannot use the limb, and if
aware something is wrong, trace
with the finger the edge of the bone
where it is not covered with Muscles
and you may thus feel the ineq-
uality at the Seat of Fracture but
should you fail to detect it then place
the hand under the heel and allow
the weight of the limb, to rest on the
hand and you will then perceive a
sinking of the bone at the point
of fracture if you now place the
other hands under this part of the
leg and support it the depression will disappear and this you may diagnose it with certainty, when both bones are broken the upper fragment is tilted forward, not by the drawing of it upwards so much as the sinking of the foot. Sometimes the internal Malleolus is Chipoff and the lateral ligament ruptured in this case the foot is turned outward and rests on its border this is generally attended with dislocation of the joint, if the external Malleolus is broken and also its lateral ligament then the foot turns inward and rests on its outer border.

Fracture of the Tibia, as by a direct blow on the leg is not uncommon, in many cases the patient may able to use
and walk but with difficulty as the limb is not well supported it is not always easy to determine a fracture along the shaft to do so you seize the foot and turn it outward and in so doing run the hand along its shaft and you may feel the motion of the bone.

Treat—place the leg at rest on a pillow and let it alone.

Fracture of the Tibula. Near the ankle (about two or three inches above the joint) the lower end of the bone sinks forming a depression the foot inclines to turn out and if you seize it and turn it in you see the bone coming into its proper place and the depression is levelled. if you now turn the foot out again the
depression is brought back and increased. 
Treat, turn the foot inward, and place a splint along the inside of the leg, bind the foot to it, and it will do well.

Fracture of both Tibia & Fibula—the fracture in this case is apt to be oblique, and the leg is shortened, and the bone may pierce the integument and so produce a compound fracture, the upper fragment being tilted forward and gives an angular deformity in front.

Treat—you must not flex the leg much if at all for the action of the muscles then increases the deformity, as the deformity is accompanied now by the lifting of the foot therefor keep the leg nearly.
Straight and flex the thigh somewhat and support well the foot and lower part of the leg, as the foot has a vicissitude tendency to sink there is great difficulty from the heel slopping if the weight is allowed to come on it, the weight must therefore be equalized so the pressure will not bear on the bandages over the heel; this you may do by turning the foot outwards somewhat and bandage the Anterior-Splint nearly to it and then the support is transferred along the inner side of the foot and this with the gentle traction of the Cord by its obliquity keeps the parts in place. In these Compound fractures there is nothing so well adapted as the Anterior-Splint you will be compelled to dress the
Wound daily and you may thus get at it readily without disturbing the adjustment of the fractured part. If the fracture is not compound, then the modified Starch Splint answers every indication and will give satisfactory results. Support the heel and limb. Making gentle traction to keep the bones in opposition apply the splints on the inner and outer aspects of the limb. Carrying them above the knee with a slight angle and then bandage the heel being supported on a pillow until the splints are dry after which it cannot get out of place. The heel will bear this support well for the little time required for the drying of the splints.
Fracture of the Bones of the Foot

Fracture of the Bones of the Foot rarely occur, the Os Calcis is very strong and if the astragalus be fractured it is generally obliquely for the most generally fracture of these bones require computation, but this is not always the case then flex the leg on the thigh to relax the muscles and apply bandage as splint and of no use in this Case when the astragalus is fractured it is generally from falling down from a height on the foot; the only deformity is that the arch of the foot is flattened, being flattened and broader than before.

Fracture of the Metatarsus - these are occasionally broken by violence and at times by muscular force as in the act of turning the fractured end.
are inclined to arch upward, causing an angle on the upper surface of the foot.

Treat as you do fractures of the bones of the hands, viz. place a flat splint under the foot and, you may use a Camphor on the top over the seat of fracture and So bandage.

Treat Compound Fractures—Compound fractures of the thigh are rare and they used formerly to be amputated but now are treated with great success by the "anterior splint." In these cases there's a great deal of inflammation, but yet the patient will not bear much bleeding, therefore you must support well the parts so as to avoid as much as possible all irritation.
Keep open the bowels; give nourishing
diet and when the powers of life are
somewhat restored from the shock
give tonics. It is necessary to
remove any fragment of bone that
are present; two or three inches
of the shaft may be removed
and the parts will still unite
all necrosed bone should be removed
and you may detect it by the probe
thus feeling it rough and loose

The Anterior Splint, mentioned in
this dissertation is the invention of
our Honored Professor of Surgery
Prof. H. R. Smith, it's superiority
over all other apparatus for fracture
and Gun-Shot wounds of the lower
Extremities is appreciated by all unprejudiced Surgeons and by the Government of the Confederate States also of the United States and if I am not extremely informed it is in use with other inventions of this in private and public practice in portions of Europe. Though notwithstanding its simplicity its cheapness, its comfort to the patient above all other apparatus these are those in this Country who do not recognize it, I fancy for no other reason than the fact that it did not originate in the land of Woodin-Nutmeg etc. I have seen it in use in the Chimborazo Hospital in Richmond Va C.S.A with great success in Gun Shot Wounds and
And fracture of the Femur, poising to its use it was their rule to amputate of which I saw a number after the Battle of Manasa and Bull Run of which at least four fifties proved fatal but when the Government adopted and introduced this splint into the Army it was informed that the majority of the same kind of cases recovered with its use, therefore the Soldier should consider it a God-send but him be the tyrant's tool for subjugation or the bold defender of home and all that's dear to a man with a human heart.
An Inaugural Dissertation
On Typhoid Fever.
Submitted
To The Examination
Of The
Present Regents & Faculty of Physic.
Of The
University of Maryland.
For the Degree of Doctor of Medicine
By
Christopher Fairwett.
of Baltimore.
AD. MDCCCLXIV.
Typhoid Fever

Few diseases perhaps, have of late years attracted more attention among the Medical Profession, than has typhoid fever. This name was first conferred on the complaint by Louis, in order to distinguish it from typhus fever, a disease to which in some respects it bears considerable resemblance, yet in others widely different. Indeed the two diseases had long been regarded as identical by European Physicians, and but little light had been revealed respecting the true nature of typhoid until after the anatomical researches of Louis. This eminent pathologist, from frequent post-mortem examination in the hospitals of Paris, became fully convinced of the essential difference between the two diseases, by observing a certain intestinal affection, which he had almost invariably found to accompany typhoid, while in true typhus, or such
affection had ever been observed. These views respecting the pathology of typhoid fever afterwards confirmed, both by the experience of Europe and this country, and since then, it has been recognised as a distinct disease. Indeed the intestinal complaint may be regarded as characteristic of typhoid fever, as the eruption is of small-pox.

Symptoms. The disease most commonly begins with feelings of languor, prostration succeeded by a chill of longer or shorter duration, which soon gives way to fever. Sometimes it begins abruptly with the chill, without the usual premonitory symptoms. But more frequently it comes on slowly and insidiously, so that it is often impossible to fix the precise point of commencement. The degree of febrile reaction is accordingly various. Sometimes it may be very mild and then again it may have all the violence of which the system is susceptible.
The first rush however is usually moderate. There are perhaps impaired appetite, thirst, increased frequency of pulse, furred tongue, flushed face, headache, pains in the back and limbs, numbness or soreness of the limbs, looseness of bowels, scanty urine, and more or less disturbance of all the functions generally.
The pulse is often but little increased above the Natural Standard. It is usually at first from 90 to 100 in the minute, but it differs greatly in different cases. Sometimes it runs up to 120, 130 or even 140, and in some cases it has been known to reach 160. It is said to be more frequent in females than in males. The abdomen, though at first flat gradually becomes distended, and clicks upon percussion a hollow or tympanitic sound. It is usually tender to the touch especially in the right iliac region and a gurgling sound may be often
heard upon possible pressure with the hand. This is usually due to the
modest collection of air and liquid in the colon. The occurrence of diarrhoea
is common in this disease. Sometimes it sets in at the commencement, but
more frequently not until the fifth or sixth day. The stools may not
amount to more than five or six in the day, though ten or twelve, or even
more, are sometimes not uncommon. They are usually thin and watery, of a
somewhat yellowish color, and in appearance have been compared to
that of pea soup. They are often
attended with a good deal of gripping pain in the bowels, tenesmus &c. Hemorrhage
from the bowels not unfrequently takes
place in the advanced stage of the
disease. The quantity of blood discharged
is sometimes very great. In some
instances it is bright red, in others it
is dark and disintegrated. Although
dangerous symptom. Hemorrhage from the bowels is by no means fatal. It requires, however, the careful attention of the physician, as by its long continuance, it may produce great exhaustion. Epistaxis or hemorrhage from the nostrils is also very common, but is in no wise important, except as a sign. It usually occurs early and seldom amounts to more than a few drops at a time. It may however become copious, and require the interference of remedies to check it. But perhaps the most characteristic symptom of typhoid fever is the rose colored eruption. This consists of small red spots about a line in diameter and very much resemble fleas. They occur most numerously on the chest and abdomen, but may sometimes be seen on the extremities, arms, or groin. They disappear under pressure of the finger and
Return when the pressure is removed. Their number varies greatly, sometimes not amounting to more than two or three—sometimes in almost countless numbers. They appear in successive crops, each lasting three or four days. Cases sometimes occur, though seldom, in which they are absent. Out of 70 cases reported by Schonle and Greel, they were absent in fifteen or about one quarter. They usually make their appearance between the seventh and fifteenth day or later, but are never seen at the commencement. At a still later period may be seen another eruption called Kerademia, but differs from the foregoing inasmuch as the spots do not disappear under pressure. These are for all minute vesicles, about the size of a pin's head, somewhat transparent, and have to be viewed obliquely in order to be seen. They may
be felt by the touch. They are usually
most abundant on the neck and upper
part of chest, but sometimes they may cover
strictly almost the whole body. As a
diagnostic sign, they are of but little
value, being present in other febrile
complaints as well, as in that under
consideration. Petechiae is another
variety of eruption which appears
in the form of dark blottches, but these
are nothing more than extravasated
blood beneath the cuticle. As the disease
advances, the symptoms gradually
increase until at length they assume
a more typhoid character. The pulse
increases in frequency, becomes more
feeble and compressible. The appetite
is completely extinguished, there is
intense thirst, the tongue becomes
heavily coated with a darkish brown
film, while dark bloodies collect
around the teeth, gums and lips.
The expression of countenance is also
Somewhat peculiar, being usually blank apathetic or dejected. The patient complains constantly of headache, restlessness and want of sleep. Subcutaneous tenderness, occasional muttering, and other signs of nervous and mental disorder are very common, especially in the advanced stages. The occurrence of bronchitis and pneumonia are also very common during the progress of the complaint.

Retention of urine is not un- frequent in typhoid fever. It generally takes place towards the close, the feeling being often so defective that the urine is allowed to accumulate in the bladder, without the want of micturition being felt, and enormous distension is thus produced, often endangering the function of the organ. To avoid this, the condition of the bladder should be examined daily, and the use of the catheter employed if necessary.
The character of the urine is also changed, both as regards quantity and quality. Mr. Sloan, who has paid special attention to it in this disease, has found it to be more scanty, thinner colored, and denser than in health, equally acid if not more so, much more abundant in urea, and occasionally albuminous. The existence of the latter is said to be an unfavorable sign. The occurrence of bed-sores is probably one of the most frequent and troublesome complications that attend typhoid fever, and should be carefully guarded against. Large gangrenous sores often take place over the lacrimal and ulnar lips, the consequence of the great diminution of vitality with which the disease is usually generally attended. Another characteristic symptom is delirium or delirium of
Mind which often amounts to delirium, stupor, or even coma. Delirium often sets in, but usually is no great degree prior to the eighth or ninth day, or later. It is generally with and indicates rather a want of power in the brain than irritation.

In some instances, however it becomes violent, so that it often requires force to restrain the patient. He is very apt to fancy himself away from home, and in his delirium, will often arise from his bed, attempt to leave his room, and perhaps fall exhausted.

Towards the close, the delirium most infrequently becomes low and muttering, so that the patient is often seen to lie on his back, with his eyes half closed, and looking with a peculiar listless and vacant stare. He picks at the bed clothes, and in a low and indistinct voice utters sentences, having but a vague
Connection. involuntary discharge is apt to take place at this stage.
If the case is to terminate unfavourably, the pulse generally gives way and becomes either excessively frequent and fluttering, or slow and scarcely perceptible, the extremities become cold, and the whole surface bathed in a clammy sweat. The countenance becomes pale and ghastly, the respiration feebler, but laboured, and death at last comes to an end the struggle. When recovery is about to take place, the countenance resumes a more natural aspect. The tongue becomes more moist, and gradually parts with its fur especially from the tip and edges. The pulse diminishes in frequency and acquires greater fullness, and the perspiration takes place, the skin becomes cooler and more relaxed, the abdominal distention diminishes, the appetite
Gradually returns, and the patient enters into the convalescent stage. The duration of this disease is usually protracted. Death sometimes takes place on the sixth or seventh day, but so early a termination is very rare. It generally occurs about the end of the third or fourth week. The period of convalescence is variable. It sometimes begins on the eighth or ninth day, but rarely before the third week. In some instances, however, the disease has been known to last for six weeks or even longer, and recovery take place afterwards. So that it has no fixed limits.

Anatomical Characters. Postmortem examination almost always reveals evidences of inflammation, especially the elliptical patches, or aggregated mucous follicles of the gland of Peyper and Mesenteric glands. These are the parts most liable to become the seat
of disease, and should they after death be found healthy, it might well afford reasonable grounds for to doubt the existence of the disease. Some authors state that there is not a single organ in the whole body in which signs of inflammation may not be detected. In cases that have died in the early stage of the disease, the patches of the es have been found thickened and their surface elevated from one to two lines above the surrounding mucous membrane. The largest are from two to three inches long, and from half an inch to an inch broad. They are generally smooth, with well defined edges, but are sometimes burred and irregular. The patches vary in number from one up to thirty, the average however is about ten or twelve. They usually appear upon the surface of the intestine opposite the mesentery. They do not all originate at the same time, but in
General come on successively, those in the ileocaecal valve first appearing, and afterwards those higher up, even into the ileum. The hard patches often undergo resolution, but the soft always ulcerate. In some instances the floor of the ulcer is the mucous coat, in others in consequence of the destruction of that tissue, it is the peritoneal coat, so as to form a communication with the peritoneum, and where this does take place, it is always in the vicinity of the caecum. Although dangerous ulceration of the bowel is not necessarily fatal. On the contrary numerous cases of cases have been reported, and these have been confirmed by subsequent dissection. The spleen exhibits striking evidence of disease. Sometimes it is increased to four or five times its natural size, and stiffened to the condition of a
bloody pulp. The liver too is occasionally found to be softened and otherwise altered, though this is much less in extent, than in the spleen. The kidneys are comparatively free from disease.

Causes—Any circumstance calculated to depress vital power may produce typhoid fever. It is very apt to prevail where large numbers of human beings are congregated. Such for instance as military camps, ships, prisons &c. Poverty, want of cleanliness, intemperance, or vicious indulgence of any kind may act as predisposing causes. The disease is chiefly confined to large cities, especially among the lower and allied, where the poor generally reside. That it is produced from the exhalations of the human body, or from human excreta, while in a state of decomposition, is now
generally admitted. These doubts enter the blood through the medium of absorption, their exciting and preserving its vital properties, just on the same principle, perhaps, that the specific poisons enter the system, such as often result from gangrene or wounds during digestion. The young are said to be more subject to the disease than the old. From careful statistics, it has been shown that the greatest number attacked is between the ages of 20 and 25 years, and diminishes from that upwards. Persons beyond 50 are rarely attacked with the disease. It is said that it never occurs the second time in the same individual. This may account for its comparative infrequency in the old.

Diagnosis. The diseases with typhoid fever is most liable to be confounded are typhus and bilious fevers.
Although typhoid and typhus are in some respects analogous, yet there are certain points of difference which will always enable the practitioner to make a sufficiently accurate diagnosis. Instead of the diarrhoea at the beginning or the extraordinary susceptibility to the action of cathartics, which almost always attends typhoid in typhus, it is just the reverse, being usually accompanied with constipation, and when fecal discharges are obtained, they are generally darker and more offensive. Feverishness from the so frequent in typhoid, scarcely ever occurs in typhus. In the latter there is more turbidness of the conjunctivae, and much greater delirium. The eruption differs also from that of typhoid. It generally commences earlier, is of a darker, and more livid hue, is much more abundant, does not appear in
Successive crops, and instead of being on the abdomen and chest is found equally over the whole body. The anatomical characters of the two diseases are very different. The Puerperial diseases of the glands of the uterus and the Mesenteric glands, so common in typhoid, is never found in typhus. The spleen too is much less frequently enlarged in the latter disease. The distinguishing hyphoid from bilious fever, it is only necessary to remark, that in the latter there are more nausea and vomiting of bilious matter, more yellowness of the conjunctiva and skin, of shorter duration, and frequently ends in intermittent; while the peculiar symptoms so characteristic of typhoid—such as diarrhea, epistaxis, dullness of expression, tympanites, and rose colored spots, are seldom if ever observed in bilious fever.
Prognosis. Although a dangerous if improperly treated, yet typhoid fever
fever is by no means a very fatal
in private practice, the majority of
cases always end in recovery. But
under unfavorable circumstances,
may however take on a very
malignant type, and become excep-
tionally fatal. This especially the
case when it breaks out among
ships' crews, the inmates of hospi-
tals, and such, who are deprived of
the luxury of a pure air. But no case
however desperate, should be despised
of until death is inevitable. Probably
there is no disease which more
unfailing to the controlling influence
of treatment than typhoid fever.
It is well known that cases have
been affected in cases the most appar-
tently desperate, even those associated
with ulceration of the bowels.
Treatment. The first and most important point to attend to in the treatment of this disease is to attend to the state of the bowels. A small dose of Castor Oil, or Sulfate of Magnesia should be given, even should there be diarrhea in order to cleanse the bowels and free them from the contact of irritating matters. If there be much irritation or discharging, the Castor Oil should be preferred. It may be given in the form of a solution, should it disagree with the stomach, and the addition of twenty, or thirty drops of Laudanum, will be found highly advantageous. The febrile symptoms must be treated according to the circumstances of each individual case. When there is a strong and excited pulse, blood may be taken from the arm in the quantity of from eight to sixteen ounces, as the strength of the patient will permit.
But in the great majority of cases it will be found a much better practice to dispense with bleeding altogether, as the disease is attended with a good deal of prostration generally. When the skin is hot and dry the refrigerent dispersions may be employed. The best of these is the Spirits of Minederis given in doses of a tablespoonful every three or three hours. It may be very usefully combined with tartarate of antimony in doses of one eighth to a quarter of a grain. Should the stomach not be irritable, Sweet Spirits of Vitriol is also a very good addition. Should there be indications of cerebral excitement, cupps or leeches should be applied to the temples or back of the neck. If the patient suffer from nausea or vomiting, the offuscating draught should be administered, prepared in the
usual way. It not only acts in quieting irritation of the stomach, but is also an excellent diaphoretic where there is much pain in the abdomen, with more or less flatulent distention, local bleeding, warm vomitations, mechanic cataplasms, and antifebrifics, or blisters should be used also. Should any tenderness be found to exist in the right iliac region or elsewhere, a few ounces of blood should be taken from the tender spot by leeches. If there be diarrhea, it may be allowed to take its course, but should it become exhausting, it should be arrested by small doses of acetate of lead and opium or other mild astringents. Such camphorated extract of opium, extract of Kino or Catechu, in order to support the failing strength befta should be given freely.
Throughout the complaint. When symptoms of prostration make their appearance stimulants should be at once resorted to, with a view to arouse vital action. Of these brandy is decidedly the best, and should be given freely, and continued for some time if necessary. Carbonate of ammonia and wine, they may also be given at the same time. In order to procure sleep and quiet restlessness, small doses of sulphate of morphia, salt, or arsenic, anodyne, or baryphos water, should be given at bed time. When there is reason to suspect the existence of intestinal disease, the best remedy is the spirits of turpentine given in doses of from ten to twenty drops. It should be given in solution. In protracted cases where the tongue is glairy...
clearing, it is peculiarly adapted as it is said to facilitate that process, and in alleviation of the bowels it is regarded as an almost invaluable remedy, being supposed by some to act as a specific. When there is much thirst, small fragments of ice should be kept in the mouth and allowed to melt there. This will be found very grateful to the patient. The drink should be bland and nutritious. Early water sweetened with 1oon sugar, and flavoured with lemon juice will be found a very pleasant beverage. Other demulcents, as sago tapioca, flavoured tea, or slippery elm mucilage may also be given. Headache should be relieved by cold applications to the scalp, such as cold cloths being out of ice water, or what is still
better powdered ice and put into a bladder and applied to the fore head and temples. Should Stupor or delirium set in, and not yield to the above measures, the head should be shaved, and a blister applied, either at the back of the neck or over the scalp, as the Mastitismen may deem expedient. When convalescence takes place a little chicken broth, or a piece of boiled chicken, or tender mutton may be allowed. The bedlotten of the patient should be frequently changed, and a strict regard should be had to ventilation and cleanliness. Attention to these is of the utmost importance.
An Inaugural Dissertation

on

Medicinal

Submitted to the边州 Regents and Faculty of Physic of the
University of Maryland,
for the Degree of
Doctor of Medicine,
by
Joseph Alcyrice Mudd,
Millwood, Missouri.

February 1864.
To Professor Richard M. Sherriff.

As an appreciation of his qualities as a teacher and a gentleman this volume is respectfully inscribed by his friend.

The Editor.
Malarias.

Of all the subjects which claim the attention of the Physicists and the Hygienists none is more interesting or important than that of Malarias. Interesting because the essential nature of the phenomenon and the laws which are supposed to regulate and direct its action have been the subject of discussion between the most scientific observers since the time at the end of the 17th century when previous attempts to the past of its existence and importance because of its vast frequency have been the subject of diverse interest among physicians.

It is one of the accidental errors...
essential constituents of the air; but the nature of the ultimate particles of the air is so close as not yet been definitely ascertained. The oldest theory respecting this and that which has been most generally advocated is that of the Daltonian theory. Dalton was first occupied by this subject in 1801, and in 1808, he published his great work on the subject, "A New System of Chemical Philosophy," about the year 1808. His theory was in substance that air is almanac and essentially composed of the various effluvia of the atmosphere and vegetable and animal matter, but more especially the former.
which acts upon the brain and mind. In fact, as the poet I view the subject.

Any very clear ideas were uncommon. The question of plant life in itself was therefore generally received in the observations which supported the theory although none in themselves were not complete. The result of the tables of Mr. William

Burgh of Scotland has clearly proved that. This physician is due the credit of having directed our attention through almost universally accepted opinion. By actual observation he has shown that the presence

of decaying vegetable or animal matter is not necessary and if still not sufficient for the production of vegetation. Many facts

in support of this theory are detailed by Dr.
Jenkinson in his paper "On the Nature and History of the Fevers," published in the Edinburgh Philosophical Transactions. Of them the most interesting are the following: In the hot and dry summer of 1794, the British army in Holland was encamped at Ruindael and Costerham. The country here was level and the soil consisted entirely of sand dry on the surface, but containing below this pure and soluble water. The want of vegetation could exist here but moderate, due to both the intermittent and insidious hypogeal. Referring to the above, in the year when some years after, the British were defeated at Salamanca in Spain, and located
in the vicinity of Évora itself. The country was so dry that at this season the Guadiana, a considerable river, and all the smaller streams had ceased to run and had nearly dried up. The vegetable matter was bare. Still, in the language of Dr. Ferguson, the troops "suffered from intermittent fevers of such destructive malignity, that the enemy, and all Europe, believed that the British host was exterminated." These facts and the many others adduced by the same observer, prove that Malaria and vegetable decomposition have no essential connexion. That they frequently go together is at once, and this circumstance evidently gave rise to the theory of Linnae.
But although Dr. Jenner succeeded in discovering the use of cowpox, he did not attempt to define the essential composition of malaria. This was left for the late Professor Mitchell of the Jefferson Medical College of Philadelphia. The theory advanced by him in a series of lectures delivered in that institution in the year 1847, is that malaria is occasioned by "poisonous fungi in the atmosphere, sufficiently minute to be carried about by the motion of the air," and that it acts upon the organism through the medium of the function of respiration.

Whether Professor Mitchell has really solved this difficult question cannot be yet positively determined. It is believed by
very many that he has. This belief seems to be supported by the following strong evidences. In every malarious region have been found in the atmosphere numerous spores of fungi. That these fungi are capable of producing disease has been demonstrated by actual experiment. Two strains of the fungi, Lycoperdon (potato) when inhaled cause narcotism and anaesthesia; and if the inhalation be kept up long enough, death by coma will result. These facts were proved by the experiments of Dr. Richardson, of London, in 1833. Dr. Hammond, Surgeon General of the United States Army, and formerly a member of the faculty of this University, once contracted an intermittent fever from
inspecting a lot of damaged hay. This was evidently occasioned by inhaling the spores collected on the hay. He also mentions the fact of headache and other febri-
tic symptoms being induced by handling old books, misty from disease. It was by inoculation from Ohio, incited himself and twenty-seven others, with the fungous growths of oat straw, and the measles resulted in every instance.

The remarkable growth of fungi during the night is coincident with, and may perhaps account for, the fact that Malaria is more active at this time than at any other.

Having given the most probable theory as to the nature and composition of malaria, it remains to be stated the principal forms.
which are been supposed to regulate it action.

For proof the subject is now referent a good
the preface in the same only & wise effici
ment meaning of protection against its efforts, de
the only condition to the animal which
it is generally. The importance of it will
be fully observable when we consider it.

part an exact description of human life which
it occasion in the region when it was

It may be that it
is more fully generated at the time or that the
cooler temperance of the night modifies it
and through bring more of its part in the

reach of impatience; or it may be that during the

hour of night the right is no limit to be
brought under its influence. Certain it is that to sleep in the open air during the night in malavious districts is highly dangerous. Lavoisier was aware of this, and advised persons not to travel through the Pontine marshes by night; and the same advice is still given to strangers by them. An interesting case of illustration of this fact is given by Dr. Reynolds. In the year 1765, the British ship of war, Thor, touched at the islands of St. Thomas in the West Indies. The crew was perfectly healthy at the time. Sixteen of them remained on shore a week, eight of them contracted the disease, and thirteen died. The rest of the crew to the amount of eight hundred and eighty men were continually on shore during the day, but returned to the ship.
at night, and not one suffered the least
from the Malaria which was very abundant
on the island. The same ship, at the same place,
the next year, lost eight men out of ten, who had
imprudently remained all the night on shore.
Malaria is more powerful in low situations
and near the ground; it has a tendency
to settle near the surface. It has been
observed that in malarious regions, at
times when its influence is most felt,
that persons living on the upper stories of
houses were vastly more free from malarious
diseases than those of the ground floor. This
fact has also been noted and turned to
advantage in the construction of barracks for
soldiers in malarious countries. Dr. Ferguson
tells us of the British garrison at English
Had the Artiguan in the year 1810, they
occupied seven lots of barracks, situated
respectively above a march which is the
inlet of the Malpais, their number five
in grade, and all one hundred feet. One of
the remote guards at the mouth was frequently
visited with delirium and black vomit, and
often died within thirty days hence. Half of the
first barrack suffered similarly from those
of the second were severely, while those of the
distant the highest from the virus, remaining
two from the dose done.

Height here is not regarded as absolute,
but as relative to the place where it stands
in question. There is a good illustration
of this in the fact that the villages of
Laguna, in New Mexico, while it is over
five thousand feet above the level of the sea is very subject to malaria. Diseases of malaria in this case is little less elevated than the villages.

The seeming exceptions to the rule that malaria tends to the ground may be accounted for by the fact that it is subject of being moved by the winds, and is often carried to the tops of high hills even frequently over them by constant winds. Hence also in this part of the district, in a district instance, is a party of thirty ladies and gentlemen sailing in the Nile, when the wind changes, bringing the epoxonions from a neighboring island. Twenty-nine of the thirty-seven died off with the fever.

Malaria has an affinity for water. The
exemption from disease among the crews of ships which cruised near land where the
malaria abounds, is attributable to this property.
By this affinity, the emanations of miasma become blended with the water before
they reach the ship, though it be anchored very near the land. This is an undoubted
fact, and every writer on the subject
hears testimony to it. Sir Gilbert Blane
and Sir John Trumpler who perhaps
had better opportunities of noticing this
fact than most other medical men speak
of it. Baudin, Macculloch and other high
authorities mention it; and Prof. Hummert,
formerly of this School has himself observed
the immunity of situations between which
and the origin of miasma there intervened.
a sheet of water. On this principle is explained
the fact that Malaria is more active during
night, because at this time the atmosphere
contains more moisture.

Malaria has an attraction for trees and
other like substances. The importance of this
fact can be readily seen, as also the protective
power of belts of trees etc., when between habi-
tations and the marsh feaun. The following
is quoted from P. Thos. Watson, "New Acmele,
in Debie, lies on the lee side of an
immense swampy forest in the direct track
of a strong trade wind that blows night-
and day, and pollutes even the sleeping
apartments of the town with the stench of the
marshes; yet it brings no fevers. The inha-bi-
tants in all were that it would be almost-
certain death for a European to sleep, or even remain after nightfall, within the range of the forest. To cut down the trees would not only be a perilous operation in itself, but would let in the silence upon the town." This property of the Malaria was well known to Lomnicki. He remonstrated against cutting down the trees between Limon and the Contra Martho.

The influence of the Malaria is diminished by the cultivation of the soil. This is an important fact and one well understood by the settlers. Sections of this country, it has been observed, that men and settled lands which were malaria, in an intense degree, yielded up their deadly properties and became
perfectly healthy under the benign influence of cultivation and the advancement of the arts.

If we here see the natural sequence of cause and effect we can also see... which is far more beautiful, the providence and the necessity of a beneficent river and Disturber, the gradual adaptation of the accidental conditions of the atmosphere, of the properties of the soil, of the nature of the climate due to the requirements of the progress of human civilization.

Having given the principal laws which have been observed to govern the action of malaria, there now remains little to be said. The prophylactic measures are...
yet simple. The same remedy, if it eradicate from the human system the effect of the poison, will again carefully and judiciously administered, be strengthened and fortified that system, that the most insidious and the most violent attacks are harmless. The history and the laws of this various poison too, will suggest beneficial means of protection.

The writer has done with his subject, he cannot claim that he has exhausted it, nor even that he has handled it in a manner satisfactory to himself. He would, however, offer no apology for the deficiencies of this dissertation, nor for his limited acquaintance of the subject of which it treats, being only in humble service in the hygiene art,
and writing at a time when it is necessary to bring every energy of the mind, and to devote every moment to the accumulation of knowledge of more immediate consequence to him as a candidate for the honors and the title of Doctor of Medicine. Nothing but a time honored usage of the University, as well as a requirement of its Faculty, would induce him to submit to their examination the present treatise on a subject connected with medicine. He hopes that his efforts to obtain a medical education have not been altogether vain, and that he may become at least a useful member of the profession. To be able to alleviate somewhat of human misery, and to minister to the wants of the body in disease are
his highest ambition.

To the gentleman of the Faculty, to whom the author of this lecture is indebted for a large portion of the medical knowledge he possesses, he tenderly his sincere thanks for their kindness. Their character as physicians, merits his utmost deference, and as gentlemen, his highest regard.

The University of Maryland, among whose alumni he is proud to number one honored father, will be ever remembered by him with the sincerest gratitude. In after years he will revisit with pleasure the sessions of 1862 42 63 84 about beneath the roof of its his Alma Mater.

February 1864.

The President.
An Inaugural Dissertation
On Pneumonia.

Respectfully Submitted
to the examination of the
Provost, Regents,
and Faculty of the University of Maryland
for the degree of Doctor of Medicine.

By
James N. Billingslea
of Maryland
Session 36 — 1863-4
We have chosen as the subject of our Inaugural Dissertation, a disease which the discoveries of modern times have invested with peculiar interest. No malady to which “flesh is heir” has been so completely mastered and understood in all its details, from its earliest commencement, through all its changes, whether for recovery or death. In truth to such perfection has modern science attained that a well educated ear can not only follow it in all its stages, but can note minutely the change from hour to hour. It may not be inappropriate to make some remarks concerning the science which has led to such improvements in diagnosis.
Hippocrates makes mention in his writings of certain sounds being heard by listening attentively to the chest. This is the first mention made by any medical writer and little notice was taken, practically at least, until the present century when Laennec of France discovered or rather invented the Stethoscope. This gave a new impulse to the science, denominated Auscultation, and renewed the zeal of those engaged in investigating diseases of the Thoracic organs. Percussion also became more fashionable, proving in itself no mean auxiliary to the one previously mentioned. These two discoveries then may be said to have been the foundation for making accurate diagnoses.
diseases of the Chest, especially that of

Pneumonia.

Pneumonia may be defined to be essentially inflammation of the substance of the Lung or as has been more fully expressed, "that condition of the Lung which leads to the formation of a plastic deposit in the cavities of the air cells, which plastic material by filling up the interior of these cells, and the finest bronchial tubes, consolidates the previous ly soft and crepitant pulmonary tissue". This latter definition which is somewhat extensive has been objected to by some, on what grounds we hardly know, for we cannot conceive how any one part can become inflamed and parts so directly in apposition and of the same structure escape.
Home Pneumonia must be inflammation of all the Pleurae.

Writers have pretty well agreed to divide this disease into the three stages of Congestion, Hepatisation, and Purulent Infiltration. The first stage may be recognized by containing more blood than natural, somewhat dark, and gives evidence of much less air than usual, though it still coughs up under pressure and will not sink in water. By some the term Spleenization has been used to explain the appearance presented while in this condition. The Lung in this stage does not collapse when chest is opened. This condition of things may last for some variable period in different cases. When it submits to treatment, may remain stationary for
several days they gradually resolve into a healthy condition, or should this not take place the inflammation increases and thus originates the 2nd. Stage of the fatiguing or solidification. In this degree of the disease as the name implies, the lung is solid and the air cells impervious to air, the consistence of the organ is much altered, being much easier torn and in handling gives evidence of much less resistance to pressure, in fact the spongy structure is characteristic of lung tissue is entirely lost. It is yet red in color, but if placed in water will no longer be buoyed up by the Bronchial tubes and must of necessity sink. In the first stage Crepitation was distinctly felt, this too has now disappeared and a
portion of the now hepatized lung will under pressure feel more like liver than the spong organ it represents. If the thorax is opened and inspected with care evidence sufficient will be seen of great enlargement of the lung dependent on the congestion and effusion of bloody into its tissues. These are the principle changes noticed in this second stage of the disease; how long this state of things will continue or whether they will proceed further and inaugurate the third (3) stage, will not admit, in this place at least, an answer. Purulent Infiltration or Gray Hepatization is the term given to designate this form of the disease. On inspecting a lung in which the inflammation has proceeded thus
far we will see the prominent points which in the other stages were morbidly red, presenting now a grayish partially mottled appearance; on subjecting the lung to pressure purulent matter will be forced out and the structure of the organ will be found excessively rotten, easily compressible under the finger and giving evidence all through its structure of becoming disorganized. It is in this stage that abscesses are sometimes discovered, though late research has demonstrated conclusively, that what used to be thought a common complication, is in truth very uncommon, as hundreds of examination by both Lainece and Andral, failed in
but one or two cases to find true and well defined abscess; indeed all writers now concur in asserting the formation of collections of pus be to of very rare occurrence. The source of errors mentioned by writers, is the forming of Abscess by the examiner himself, by pressure into the yielding structure of the Lung.

Authors also speak of Sangue as being an occasional complication or result of the inflammatory condition present; this, Watson, from whom we have not scrupled to borrow, says, certainly does sometimes intervene, and is known by the darker color of the Lung, and during life by the horrible odour present.
We have thus given with some minutenesses the anatomical lesions discoverable after death. But it must not be expected to find in all cases the whole, or even greater part of the lung involved in the disease, frequently patches as it were scattered here and there through the structure will be the only lesion discovered.

It has been found by experience that inflammation does not attack irregularly any part of the lung, although there is a form of the disease which consists of spots of inflammation, as it were, scattered through any part of the parenchyma; this has been called Lobular Pneumonia.

This fact is a special form of the disease and recognized by all writers, we
wish however to speak of the particular part, which it has been found to shew the greatest preference for. All recent writers speak of the right Lung being attacked much more frequently than the Left; thus in the cases of Pneumonia, five would be in the right, three in the Left, and two in both, this is about the usual ratio, though many may differ considerably. The back posterior and lower portion of the right Lung, is by preference the most common seat of the disease, in its commencement and from thence it may spread, involving the whole of one or even both Lungs. No explanation, save the increased size of Right Bronchi, has been offered to account for increased Susceptibility.
The most frequent complications of this disease are Bronchitis and Pleurisy; the former exists in every case of Pneumonia indeed frequently the disease commences by inflammation following the course of the tubes, which ramify through the structure of the Lung. Pleurisy is by no means an unfrequent complication, the anatomical structure of the parts, renders it difficult for us to see how parts can be so contiguous, and yet not participate in each others maladies. Pericarditis, Icterus, and many other diseases may be occasional accompaniments.

We will next endeavor to give an account of the Auscultatory signs, which lead us to suspect the existence of inflammation.
In examining a healthy lung with the ear, the first sound that attracts our attention is the entrance and exit of air. The air passes through the Bronchial tubes, then into the air cells, expanding them as it enters, thus producing the sound called vesicular respiration; this is the healthy sound, and the one altered or entirely abolished by this disease.

The first effect of inflammation is to suspend the secretions, making the part unnaturally dry; this is accompanied by a viscid tough secretion poured out by the membrane. Enlargement then is detected by a fine crackling sound, which is said to resemble the crackling of salt thrown on the fire, or the rubbing of a stone of the hair close to the ear, between the fingers.
The exact seat and nature of this sound has been a matter of some doubt, though most writers agree that it is produced in the minute air tubes, and is caused either by the passage of air through liquid, or as some think, from the sticking together of air tubes with viscid mucous, the displacement of which produces the sound in question. This sound denotes the commencement of inflammation of the lung, and whether it diminishes or increases indicate the progress of the disease. Should this sound diminish or grow less, the malady would soon be relieved and resolution would then have taken place. But most usually nothing of this kind takes place, but instead, all the sounds decrease, so
vesicular murmur, no crepitant rhonchus, but
instead a blowing, whistling, creaking sound
resulting from air passing into the still
previous Bronchial tubes. The whole part
affected has now become perfectly impermeable
to air and is no more use for breathing pur-
poses than the liver. This sound is called
Bronchial inspiration and gives evidence
of serious disease. Now the patient to
repeat the voice would be transmitted
through the solid lung, with so much
facility and distinctness as to giv
rise to the term Bronchophony or
Bronchial Voice. Percussion practiced
in this stage will no longer give the
clear resonant sound as in the healthy
lungs, but instead a heavy dull sound.
The lung frequently remains for some time in this last condition, and during the continuance of this degree of disease is a source of much anxiety to the practitioner, for he can not say certainly that the further spread of the malady will be here arrested. Fortunately in the majority of cases the disease will proceed no further, but will again revert to the first stage, and so to recovery. This however, fortunate termination does not always take place, and then the inflammation proceeds to the third (3d) stage, also called Purulent Infiltration. In this degree of the disease the auscultatory signs are the same as in the last described, with addition of mucousRunnings
and grunting expectoration may be heard; though many cases undoubtedly proceed to this stage without any evidence, auscultatory or otherwise becoming apparent. In the majority of cases the constitutional symptoms lead us to suspect the advancement of the inflammation before evidence is given by the other signs. It is in this stage that abscess may supervene and give rise to very unpleasant consequences.

We have as yet paid very little attention to the importance of percussion, as a diagnostic sign in pneumonia. This was first brought before the profession by a German Physician named Auslaenger, and prior to auscultation was
an indispensable aid in making an accurate diagnosis, even now, when the other
process is carried to such perfection, there
are few practitioners who would be
willing to give up this art. In the
first stage of pneumonia, it is of very
little value, for the lung is still filled
with air and quies forth the usual clear
percussion sound. When, however, the sec-
ond stage is forming, nothing is more
satisfactory than to limit its extent by
this means and thus satisfy the practi-
tioner that the auscultatory signs are in
accordance with those thus developed.
We have now spoken of the physical signs
mostly in use, and will proceed without
further delay to the general symptoms
which usher in a case of inflammation of the lung. Most patients will tell you upon inquiry that for several days they have felt unwell, have had very little appetite together with weariness and unwillingness to make much exertion; more or less of chilliness and flushes of head and even distinct rigors not unfrequently the first evidence of the coming disease. Usually pain characterized rather by dulness than other peculiarity, is felt just under the nipple of affected lung, attend with difficulty of breathing and cough with a very diagnostic sputa. There is nothing in the commencement of many cases of this disease, which would lead us to suspect the onset of such a
fairest malady; any inflammation may be ushered in with chills &c and even the prostration of muscular power which is so marked in this disease may take place, though generally not to so great an extent.

The most prominent symptom in severe cases is the Dyspnoea, which is often time excessive and certainly is the most distressing feature of the disease. This is to be accounted for in several ways. Either so much of the Lung is involved in the inflammation as to require very much increased respirations to properly aerate the blood, or from paresis the chest is not sufficiently expanded to permit the proper dilatation of the Lung.
The Dyspnœa is generally a very good criterion of the severity of the case, and improvement or regularity in the respiration denotes a favorable termination of the case. The pain is peculiar both in kind and situation, and as a diagnostic sign is of some importance. Situated, as we have said before, just below the middle of the affected side it is pretty constant though occasionally felt over the side and posterior part. The implication of the Pleura lining the lung is supposed to give rise to the symptom under discussion and increases or diminishes as the Pleural Membrane is more or less inflamed. Pain in some degree is present in nearly all cases and is aggravated by cough, change of posture or from percussion.
During the first twenty four hours of the disease the cough is present is dry and not until the secretion is in a measure restored does the expectoration, which is of such diagnostic value, appear. No genuine case of Pneumonia it may almost be said passes through its stages without developing this sign. For the first day the expectoration may have no other peculiarity than the viscosity and toughness which occur in other diseases as Bronchitis, soon however upon careful inspection a tincture of redness will be discerned, this increases with the disease until the sputa becomes distinctly colored. A yellowness is also manifest resulting from the admixture of blood and mucous. This is described as the rust colored.
Expectoration of Pneumonia and is considered by some of itself diagnostico of this disease. In Bronchitis we have the phanta often streaked with blood but any one who has ever seen the vomited and through a colored saliva of the disease we are speaking of would have no difficulty in distinguishing it from that of the milder affection known as Bronchitis. By attentively watching the expectoration, we can often determine the state or progress of the inflammation. If the phanta retains its viscosity and the redness increases or does not diminish the Pneumonia is either extending or stationary, but when the viscosity is less and yellowness predominates, we may
generally safely conclude that the inflammation is not extending, and should the expectoration become white, then auscultatory signs of improvement might with great certainty be looked for. When the termination is not so favorable the expectoration may not be seen owing to physical inability of the patient.

In the third stage of this disease, writers often speak of the "Purus puris expectorativo" thus they pay when it occurs is diagnostic of this fatal period.

We have now mentioned and dilated sufficiently on each symptom, separately; but in practice we must not expect to find these signs and symptoms come one after the other in regular order, for when called to a case of incipient Pneumonia we
will find more or less of fever, dyspnoea, cough and perhaps with every deep inspiration pain in one or other side; under prominence may be given to any one symptom by existing complication; add to these enumerated signs the auscultatory phenomena before mentioned and we have the disease denominated Pneumonia.

The Prognosis in this disease must necessarily be doubtful. In a subject of good constitution, not past the middle period of life, with an uncomplicated ease of the disease the prognosis might be expressed favorably. On the other hand where the disease attacks broken down constitutions, persons debilitated by age, or very young subjects, the termination is unfavorable.
If the very young and the very old this disease is peculiarly fatal, few cases in such subjects ever recover. In duration this disease is short, most cases terminating one way or the other in two weeks, the average is said by some to be, ten days. The recoveries in good constitution are rapid, but care must be exercised in moving about and exposure as sepulchers are particularly dangerous.

The causes of this malady are most frequently exposure to cold following excessive fatigue. Anything, such as loss of rest old age with its infirmities, youth with its susceptibility to cold and natural imprudence, these are the most frequent causes, though many other things as wounds, may light up fatal disease.
We will now without further remarks proceed to the important subject of the treatment of this affection. At the present day two distinct modes of treatment are in vogue. The one called the depleitory or depressing plan; the other the stimulant or supporting treatise. We will first speak of the former, which in this country at least, in the manner taught by them, and that generally understood, has the most numerous supporters. This consists in the use of the lanceet, cups, and leeches, Tartarized Antimony and Calomel. The use of blood letting was naturally suggested to the minds of the early physicians, the disease Pneumonia, in its character essentially inflammatory, the obvious remedy would be such as would deprive
the disease of its food, thus by removing the 
fuel extinguish the flame. The practice of 
bleeding in Pneumonia became as common 
as giving Quinine in Periodic Fevers; so soon 
as the disease was fairly made out, the 
lancet was brought into requisition and 
blood sometimes to an enormous extent was 
allowed to flow; this was frequently repeated 
several times during the course of the disease. 
This practice at that time may have been 
to a certain extent allowable and a fair 
proportion in comparison with other meth 
ods of treatment recovered, though the 
convalescence was remarkably tedious. 
At the present time bleeding from the 
arm is used in but few cases, when the 
patient is robust and young, accustomed to
active out door exercise bleeding may in due time prove palatable and in this class of patients most Physicians agree in the necessity for using this remedy. Some practitioners wholly oppose this weapon in the combat, and will speak disparagingly even of Cuchod Leeches. The abstraction of blood by this method is most generally sanctioned by the Medical Fraternity. The relief often experienced by the patient on the abstraction of a few ounces of blood by this method, is proof sufficient of the efficacy of this treatment. Leeches in some delicate patients are equally useful. Cups applied without the abstraction of blood often afford great relief to the patient. It may then be understood that patients seen early may require depletion by the Lancet, but in the
In the great majority of cases blood taken by cups and leeches will suffice. In some cases blood taken in any way is absolutely injurious. We must never bleed because the disease is pneumonia, unless the existing symptoms indicate the necessity of such practice; bloodletting would most certainly prove at least an equal, if not a better remedy in the majority of cases of this disease, as they appear at the present day.

The use of Tinctured Antimony in this disease dates back some time, and though it has had its opponents and even yet has bitter enemies, still at the present time no one remedy is more universally employed and none which the profession would not sooner sacrifice.
The Physicians of Italy have the credit of first employing this remedy in Pneumonia, from then it has spread over all the civilized world. Some of them have been in the habit of employing it in enormous doses increased gradually so as to prevent vomiting. It is used principally in the first stage of the disease, and if pressed to its full effect, nausea, and maintained in this degree for a sufficiently long period of time, will frequently prepare the necessity for blood letting. If used in the later stages of the inflammation, the prostration occasioned by the medicine in conjunction with the extreme debility naturally present, will make an unpleasant diversion both for the patient and Physician. Taste ^emetic when used carefully and
Under intelligent medical supervision is one of the safest articles in the materia medica. In children unusual precaution must be observed and indeed in many cases must be wholly abolished. At times, and in some of the cases even, this remedy seems to have complete control. The inflammation is subdued and the other symptoms yield with apparent readiness, the illness is short and the convalescence speedy. Vaster Emetic is usually given in small doses. When the patient is seen early the medicine may be given in half grain doses and repeated until free emesis takes place. This will be repeated or not according to circumstances. When the first few days have passed vomiting should not be desired, but a state of nausea.
Many prefer that the medicine shall not act violently, thinking that the inflammation is easier controlled by this method of administration. It has the advantage over bloodletting that it is seldom contraindicated by any existing debility, for with proper precautions the drug may be so administered that good will in the majority of cases result. We may then conclude that as a remedy this holds as high, if not the very highest position among the medicines employed.

The use of Calomel in this as well as many other diseases is very much lauded. It has such powerful influence over the secretions and such control over many inflammations that it has many supporters.
When the other remedies enumerated have been used and still the inflammation has not been subdued, mercury oint. in small and repeated doses until the gum of the patient have been effected, has been found of great utility. Opium is given with considerable caution in this disease as the blood is but imperfectly oxygenized, there is danger of rendering the symptoms unintelligible. The relief afforded when the patient has been without sleep for several nights is often very striking and, induces us if not prepared upon sound principles to repeat the practice, to employ it with little reserve. Counter irritation with blisters over the diseased is of great value and often
affords the most prompt and immediate relief. This plan of counter irritation is to our mind one of great utility and ensures more ease and comfort to the patient than many other more vaunted means of cure.

These are the principal medicines used in the treatment of this disease. When carefully and judiciously administered a fair number recover under this treatment, and it is only when previous conditions either of age or condition render the complications particularly unfortunate that these remedies are not equal to the cure of this disease.

During the last few years a class of physicians have come into existence who look upon all inflammatory conditions
as demanding the use of stimulants in
greater or less degree. Pneumonia has
been one of the principal arenas for the
evitation of this new method, the debility
usually present seeming to invite a trial
of this remedy. It is hardly possible or even
proper at this recent date to speak posi-
tively of the results of this treatment. Most
experienced observers deprecate the admin-
istration in all cases of this Alcoholic
Stimulus; while they admit its occa-
ional beneficial influence, yet used indis-
criminately it can not but prove inju-
rious in very many cases. The happy
mean, between those who would starst
their patient by depriving him of the
element of life, the blood, and the other
by employing an aperient. Under this vital fluid incapable of responding prop-
erly to the nervous demands.
We may thus sum up briefly that as disease, Pneumonia not excepted, should have its treatment thus mapped out.
As has been said hundreds of times, but not acted upon, treat the symptoms as they arise. In the early stage nauseous may be indicated and usually if administered prove innocuous; likewise when debility from any cause whatever arises, stimulants should unhastening be employed.
We have now spoken of the most general methods of treatment resorted to in this disease. Many points from various
causes have not been much dilated upon. To mention every thing which has been some time or other of service in this disease would require more time than we have to spare. The remedies we have mentioned if used with skill and judgment will generally suffice to carry the malady to a happy termination.

Yours tr.

S. W. Billingha
Pults Infirmary

M. D.
An Essay on Anaemia Respectfully Submitted To the Honourable The Regents, Provost and Faculty of the University of Maryland by Gustavus C. Dohme Baltimore Maryland.
Anaemia.
The word means literally bloodlessness but in reality relates more to deficient quality than quantity of the circulating fluid. Before proceeding to give the symptoms and treatment of this disease it would appear best to describe the general character of the blood and the office it performs in the human economy. The blood in anaemia cannot will help filling up the hollow vessels which contain it but it is wanting in the most highly organized, the most truly living of its constituents; it is pale from the diminished number of those floating red globules which give it natural hue. The supply of
red globules is by far the most important portion of the blood. It is the general circulating fluid of the animal body, the source of all nutriment and growth and the general material from which all the secretions, however much they may differ in properties and composition, are derived. Food or nourishment, from without can only be made available by being first converted into blood; it serves also the scarcely less important office of removing and carrying off principles from the body which are hurtful, or no longer required. In all vertebrated animals the blood
has a red colour and probably in all cases a temperature above that of the medium in which the creature lives, the heat of the blood is directly connected with the degree of activity of the respiratory process. In man the temperature of the blood seldom varies much from 98° Fahr. when in a state of health even under great vicissitudes of climate. In every creature of this description two kinds of blood are met with which differ very considerably in their appearance—that contained in the left side of the heart and in the arteries generally and that contained in the right side of the heart and in the
veins, the former or arterial blood has a bright red colour; the latter, the venous blood is blackish purple. Further, the conversion of the dark into the florid blood may be traced to what takes place during its exposure to the air in the lungs, and the opposite change takes place in the capillaries of the general muscular system, or in the minute tubes or passages distributed in countless numbers throughout the whole body, which connect the extremities of the arteries and veins. When compared together, little difference of properties or composition can be found in the two kinds of
Blood; the fibrin varies a little, that from venous blood being soluble in a solution of fibrates of potassa which is not the case with the arterial fibrin. It is very prone to absorb oxygen and to become in all probability partly changed to the substance called binoxide of protein, which no doubt exists in fibrin as arterial blood. The only difference is in the gaseous matter the blood holds in solution, carbonic acid predominating in the venous and free oxygen in the arterial variety. Its specific gravity varies from 1.053 to 1.057, is alkaline to litmus paper, and a saline disagreeable
taste, and when quite recent a peculiar odour which almost immediately disappears. An odour may however in aptiria and be developed by an addition of sulphuric acid which is by some considered characteristic of the animal from which the blood was obtained. To the naked eye the blood appears a homogeneous fluid, but it is not so in reality. When examined by a good microscope it is seen to consist of a transparent and nearly colourless liquid in which float a countless multitude of little round red bodies to which the colour is due; these are the blood-diskes or blood corpuscles of Micro-
scopic observers. They are accompanied by colourless globules fewer and larger, the white corpuscles of the blood. The coagulation of the blood effects a kind of natural proximate analysis; the clear pale serum or fluid part is an alkaline solution of albumen, containing various soluble salts; the clot is a mechanical mixture of fibrin and blood-globules swollen and distended with serum of which it absorbs a large but variable quantity. The following table represents the composition of healthy human blood as a whole, it is on the authority of M. Decanu.

Water 700-75
Fibrin: 2.10
Albumen: 65.09
Colouring matter: 33.00
Crystallizable fat: 2.43
Fluid fat: 1.37
Extractive matter of uncertain nature soluble in both water and alcohol: 2.19
Albumen in combination with soda: 2.26
Chlorides of sodium & potassium
Carbonates of lime and magnesia,
Phosphates of lime & magnesia &
Iron, bisquioxide of iron: 2.40
Carbonates & Phosphates and Sulphates
of Potassa and Soda: 8.37
Loss: 2.40
Total: 1,000.00
Respiration is performed by the agency of the muscles, which lie between and about the ribs and by the diaphragm. The lungs are not nearly emptied of air at each expiration. Under ordinary circumstances about 15 cubic inches only are thrown out, while by forced effort as much as 50 to 60 cubic inches may be expelled. This is repeated about 18 times per minute, when the individual is undisturbed. The expired air is found to have undergone a remarkable change; it is loaded with aqueous vapors while a very large proportion of oxygen has disappeared and its place been supplied by carbonic acid. The
total volume of the air seems to undergo but little change in the process, the carbonic acid being about equal to the oxygen lost. The oxidation of combustible matter in the blood is effected in the capillaries of the whole body, not in the lungs, the temperature of which does not exceed that of the other parts. The oxygen of the air is taken up by the lungs and carried by the blood to the distant capillary vessels, by the aid of which the secretions and all the mysterious functions of animal life are undoubtedly performed. Having briefly explained the composition and general state
of healthy blood, I will now take up the subject of anaemia or bloodlessness, which term means, as before stated, a deficiency of the discs in the blood. The word has been objected to by some writers because it has been supposed to imply etymologically that there is a deficiency in the actual quantity of circulating fluid, of which deficiency in quantity there is no proof; and by some writers Spanaemia or thinness of blood has been proposed in its stead. In reality there is no occasion for fault finding. Anaemia by the analogy of Greek etymology does not mean deficient quantity.
now in the blood, the physician - 
traces proof of the manner in which 
constructive metamorphosis are 
carried on; he finds out through 
certain unmistakable symptoms 
the deficiency of the most important 
constituents of the blood - the red 
blood discs - showing plainly a 
deficiency of life. Either the supply 
of blood is too small, or its assimila-
tion is defective, in both cases, 
either absolutely or relatively, to 
the existing demand. In many 
instances it is easy enough to lay 
the finger upon the organ of life 
which is to blame. We can detect 
without difficulty the causes
at work. Starvation, which any body can understand, leads to an absence of the organic matter made out of blood; disease of the stomach, in which the aliment are not prepared for assimilation; disease of the liver and duodenum, producing the same result; disease of the intestines or their glands refusing to take up adipose matter; especially, and so preventing cell-growth; disease of the spleen or lungs which physiological experiments, independent of our observation of morbid phenomena, show to be answerable
for the formation of new blood
discs in a way yet unknown;
mental derangements, care,
disappointment which so read-
ily arrest the activity of the
assimilating viscera, — these
agents, and many more, are
readily comprehended as cau-
ses of anaemia, yet there seem
to be causes where nothing tangible
of this sort is to be made out. Where
the paleness of the blood is seen in
the face, lips, tongue or in a drop
taken from a pricked finger, and
evidenced by faintness, weakness,
palpitation, anasarca, amenorrh-
ea, etc., are even more marked than
where demonstrable lesion is to be found. The loss of the constituents of the body, which are of a nitro-genous chemical composition, is more marked than that in the hydro-carbonaceous fat; the reason is partly that the destruction of adipose vesicles is somewhat concealed by the saturation of the tissue with serum, which gives it a false plumpness; partly that fat being absorbable without much (if any) alteration, is easier taken up than fibrin or albumen, which require a chemical solution before they can be absorbed. M. Andral has analyzed the
blood of a patient with anaemia, where the blood globules amounted to less than 29 parts in 1000, whereas their natural proportion should be at least 120 parts in 1000; more than $\frac{2}{3}$ of this constituent was missing and yet the patient was living and moving and very likely quite convalescent in the end, if natural rational treatment was adopted. Now in pure anaemia there is not found any degenerated, de-vascularized substance, the missing globules have not relapsed into a lower life, so that their ruins or debris should constitute foreign materia
matters; but they have been used up in the regular way and have supplied materials for the tissues, as the are formed from day to day, at the same time there has been a deficient renewal or supply, an arrest of that continuous development of blood, which is necessary to complete life. This defective supply of the materials of growth weakens the vitality of many of the formative and excreting viscera, hence in case of anaemia I've often find that the liver is not so lively as it should be, and some of the colour it ought to get rid of stays in the circulation or exudes and stains the skin of a
bilious hue, or perhaps the kidneys are deranged and the Urea which should be drained off is kept causing very serious derangement of health; or again, anemia may depress the creative power of the blood, that instead of the body being built up with elastic and highly vitalized fibrin, it has to put up with a cheesy brittle substance called tubercle. The blood in anemia is found to be very thin and watery, when it is drawn from a vein it readily coagulates and forms a very small contracted clot generally coated with a fluffy coat. This appearance which was formerly
erroneously ascribed to inflammation is probably due, as andral supposed, to a predominance of fibrin over the red corpuscles, for these are diminished much more than the fibrin, being in some extreme cases reduced to 1/5th of their natural amount. The albumen is also generally scantier than usual. Although the symptoms of anaemia are chiefly those of great weakness or depression, there are often others of an opposite character indicating irritation or excitation of function as for example pain in the left side and epigastrium, nausea, colic and diarrhoea, which may
be traced to the weak digestion leading to the production of irritating matters out of the food which has been used for nourishment. In opening the head a small quantity of serum is found under the arachnoid and in the ventricles sometimes with a little lymph, the membranes are remarkably vascular but the vessels most distended are the veins, and in the larger of these as well as in the longitudinal sinus there is a firm coagulum in places, especially at the torcular hirophili. This coagulum blocks the whole sinus the fibrin being separated from the other constituents and portions of
it softened down into that opaque, purulent matter which was long mistaken for pus but which Dr. Gulliver has shown to be merely such a desintegration as stagnation is in a warm temperature is able to effect, and is probably somewhat of the nature of fatty degeneration. Such cases have been mistaken for instances of meningitis; the fibrin itself does not diminish in proportion with the other constituents and hence anemic blood coagulates sooner than good blood. Emaciation is not a constant result of anemia and it is not an unusual thing to see the most pallid subjects esp-
pecially females) fat. Dropical effusion into the cellular textures is a common result of anaemia, when either long continued or aggravated by additional causes of disturbance to the circulation; and slight inflammation of the pleura or other serous membranes, these speedily produce copious exhalation into the closed sacs. Anaemia although ordinarily amenable to treatment may yet in aggravated form prove a formidable disease, and even be suddenly fatal through syncope induced by some exertion or additional cause of exhalation, or it may more gradually lead
to death by asthenia, or general failure of vital powers, often attended with anasarca or by development of tuberculosis or other cachectic disease to which the individual may be predisposed, or by slower and less marked changes brought about in the nervous centres, and ending in paralysis, insanity, and leprosy. The general symptoms of anemia are weakness, muscular weakness evinced by the faintness, breathlessness, and fatigue following upon exertion or exercise; weakness of the heart shown by the feeble thready pulse rendered
very frequent and palpitating by slight exertion, or change of position and often becoming irregular and failing afterwards, liveliness of the whole circulation manifest in the coldness of the surface of extremities, organic weakness shown by the loss of appetite, indigestion torpor of the bowels, scanty and disordered secretions defective nutrition, especially of the muscular parts; and imperfect san-guification, for the blood that remains in the system is diseased being poor and watery as well as scanty. In the treatment of this disease it is of the utmost importance
To remove the causes, while these continue to act the use of remedies will be of only temporary benefit. Should the digestion be disordered it must be corrected; constipation must be obviated; any hemorrhage or other drain which may exist must be arrested. Moderate exercise on horseback in the open air is of great benefit, and the sleeping apartment should be large and airy and the ill effects of irregularities of temperature should be prevented by flannel next the skin, and by introducing the general system and health by introducing as quickly as possible a large amount of water.
genius food such as milk, beef tea, eggs etc. Iron is required to supply the red blood corpuscles. One of the best and easiest preparations of iron is the well-known Mixtura ferri-aromatica composita of the London Dublin and Edinburgh Pharm. also the United States.

Rp.

Pulv. q. Myrrhae 3 j.
Potass. carbon. 3 j.
Aqua Rosa e. 3 j.
Ferri Sulph. cryst. diiss.
Spirit Myristicae 3 j.
Sacchari aceti 3 j.
misce, leg. art. preparatur.
The United States dispensatory.
The dose is one or two fluidounces three or four times a day.

Of course acid and aciduloris salts as well as all vegetable astringents containing tannic organic acid, are incompatible with it.

Large doses of the more soluble salts of iron have an action on the mucous membranes which parents
them often from being taken up and also arrests digestion in some extent; evidence of the latter is found in loss of appetite and for-

ishness, and also of their reaction in the blackening of the gut, much sooner than by the formula above mentioned. It seems that the carbonate which is prevented from decompo-

sition by the sugar and the finely divided oxide + carbonate diffused through the thick liquid were par-
ticularly easy of solution in the water saturated with salts and carbonic acid, which is the solvent with which it must be done. Other articles are of great benefit, depending
however most generally on the system
which, as in all other affections,
must be met and treated. Chloride
of sodium is a necessary article.
Chlorine in the shape of hydrochloric
acid has been used as a bath also
inwardly in combination with
besqueoiside of iron in the well known
preparation of the United States
dispensatory. Sincerely, 
iii, " =
chloride. Amongst the purgative
medicines, are amiable,
as most of them do harm by lowering
the system, and reducing the
vital organs: amongst the number
are gamboge, sulphate of magick,
colocynth, mercury, etc. Amongst
the number of more useful remedies are mentioned. Aloe vera and aloes, the latter particularly has given most satisfaction, and it contains a soluble active principle called aloin not hitherto supposed to be an alkaloid but all experiments have convinced me that it is more like an active neutral principle which varies considerably in property and appearance in the different species of aloes, and hence can hardly be called an alkaloid; it does not form salts with the mineral acids and is neutral to test paper. Its medical property is bitter tonic and the purgative power for the treatment of skin diseases.
resides in its inadulterable resin. Its action is very slightly eliminative; in moderate doses it only augments the solid brown excretion of the colonic glands and produces faeces feculent in smell and of consistant form, whilst at the same time it restrains by its bracing bitter the formation of mucus. Its action is seen on moist piles; it dries them up and makes them smart; and therefore we can usually judge how it acts on the gastro-intestinal mucous membrane and at the same time by the more peristaltic action and by the solid mass passed along the gut the all-
already existing mucus is cleared away. Strychnine is often combined with Iron. This remedy exhibits a power over muscular fibre, by restoring regularity of heat and general system. Digitalis is given in small doses when there is much palpitation of the heart after slight nervous excitement etc. It should not be used longer than necessary as it acts on anaesthetic on the cardiac nerves; its browning effect extends along the whole pneumogastric nerve and reduces the appetite and produces nausea. Other bitter tonics have been combined with Iron such
such as columbo cascarilla quinia
zodine, to give tone to the stomach
and equalize circulation and
so prepare the stomach and general
system for a more powerful treatment.
The success of the treatment of anaemia
becomes manifest not only in
the return of a healthy colour to the
lips and skin of size to the super-
flcial vessels and of strength to
the pulse, but also by an improve-
ment in all the functions breath,
strength, digestion, etc. Diffusable
stimulants as carbonate of ammonia,
valerian, alcohol, other wine
and spirits are sometimes used in
peculiar cases. When great nervous
Depression is manifest. Symptoms of nervous excitement are alleviated by the sedatives as hydrocyanic acid, Belladonna, Conium, Hyoscyamus stramonium etc.
1864

In

Inaugural Dissertation

on

Chorea

Submitted to the Examination

of the

Pawel Buczyński, Faculty of Physic

of the

University of Warsaw,

for the degree of

Doctor of Medicine

By

J. Henry Caineat

of

Warsaw.
The document is a handwritten page, with the text not clearly legible. It appears to be a historical or legal document, possibly discussing a legal case or a historical event. The handwriting is cursive and difficult to transcribe accurately. It seems to be discussing legal or historical matters, possibly involving the actions of individuals or entities.
As a matter of fact, it was a regular situation. In those years, the capture of a gold mine was not uncommon. In practical terms, it meant setting a plan in action. The attention had to be paid, the support had to be given, and the effort had to be made. One had to know the ground, knew the limits, and understand the conditions. One had to act upon it.
now, in order to have a soundly
found a sound base, must
be made a sound base con-

ition of to bring to light, and
theorem of relation.
and they are to

decide to read these and to think
out in this will be a sound
and can be put in principle or-

ite to themselves.

addition, it was said
would not do it. The only purpose
is continue to base this or where
instead, they will begin to say
...
When is ... it is not that he desire virtue, but that the desire is for the good of the body, and he wants to make it such a thing. He knows that he is not so good as he wants to be, and he knows that he is not so bad as he wants to be. Therefore, he desires virtue, but he desires it for the sake of the body, and he desires it for the sake of the mind.
On a cold winter's day, as the snow fell
in a continuous blizzard, I
was wrapped in a warm coat
and hat, walking slowly through the
city, trying to keep warm.

I was thinking of my past,
of the people I had known,
and the events that had
shaped my life. It was a
time of reflection, of
remembering.

As I walked, I noticed
a potential threat in the
world, a sense of unease
that hung in the air.

I knew I had to act,
to make a difference,
no matter how small.
I now see a new aspect to the once vivid nature of the illness. With the many physiological changes and consequences, there may seem to one place, then in another.

However, I admit that in little could be done in the dead body to discover the nature of the illness. It is with that it—

matter not we will be expected in addition to ascertain one point—otherwise it may only be for me to state it is a doctrine to be adopted or denied.
Thus it is a true saying to hope for the best, to organize practice, and to proceed methodically.

This in regard to a certain social character of certain individuals have termed "societies" forms. Thus one thing is clear: no other way of a line, and the principles found in the sciences, literature, and cultures connected with the inventions.

Such ideas, then as comprehensions and multitudes of elements. For, independent of the moral and original, it is certain, the human laws cannot lead to confusion.
to come under a somewhat similar experience. In the picture upon which
I write is a scene of little beauty to be appreciated fully. To communi-
cate your appreciation.

The bird on the upper left hand corner according to its direction
of flight during his flight is in a constant state of change of the moment by the patient's
measurement. Just as you observe
is evident from the attitude of
his plumage. Such behavior.

but then why should you
my own mind that it is a
situation so the narrative goes. Fare

Till any time is change, man
and thus a part of

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I was unable to determine the precise nature of the document. It appears to be a handwritten page with some text, but the handwriting is not clear. It seems to be discussing a medical or scientific topic, possibly related to the nervous system or the spinal cord, but the exact content is unclear due to the handwriting.
The diagnosis is easily
established by the absence of
ecchymosis and the rigid fixation of
the tendons, with the function
lessened, which the school of
medicines are of a distinct
nature.
to the people from among them, to be head, and offering no reason to be added to our counsel.

I am bound to give notice of matters. I am bound to our treatment. I set that within the land grand scale.

In the great indication we as held, never to meddle with another. Never to increase the number of specimens. Recently to be following to me ascertain any moral reason or else.

We are only the philosophical

... a problem...
I have no opinion, but as a
clamor is being made upon
this, and as our letters since
the beginning of the 
rebellion have not to take up in order. I shall
only speak of their treatment
as I think requisite. It was the
above mentioned indications,
that he had the indication
for asthma, and if you were ever
brought there, and to that
indication in the case of the disease
mentioned, indeed should be used.

In all cases the cold
should be frequently given.
be attended to, and said to be in a state of anticipated danger, and the necessities present with it, whereas the medical and surgical treatment with particular of the latter symptoms, which must have been in consequence of the antecedent ablation of the affected portion.

Our internal physician,

Dr. Samuel Chase, recommend the patient to the following treatment: "..."
The I think the
will be latitude to date the one
I shall write. If my limited time
of Ptolemy should meet our
affection of the thing we
are connected to the keen hear.

These jectures must
be given for the moment, and our
육tedness to kindly and judg-
improved, I estimate my remark.

G. E. Winsor

Mompaso

7th 1864
a

Report of Surgical Cases

Submitted for the Examination of the
Biennium, Regents and Faculty of Physic
of the
University of Maryland
for the
Degree of Doctor of Medicine,
by
A. W. Lodge.

February 12th, 1864
Gentlemen,

I have the honor to submit for your examination the following report made from my own observations in the U.S. Army General Hospital, York, Pa., during the summer of 1863. With an apology, that so much of my time being occupied at the hospital where I am at present on duty, I cannot make the corrections I desire for this.

I have the honor to be

Very Respectfully,

A. W. Lodge

For the Provost, Regents, and Faculty of the University of Maryland
Daniel Crites Private Co. E. 1st Regt N.Y.

He was wounded at the battle of Gettysburg July 3d, 1863 by a solid leaden bullet entering left foot under great toe, passing obliquely outward and backward making its exit at the Tarsal articulation of the fifth metatarsal bone.

Comminuting the bone in its course.

States that several pieces of bone were removed at date of injury, had some fear and considerable constitutional disturbance.

Foot swelled and painful.

Treatment - antiphlogistic, locally cold water dressings. Came under my care August 6th. Six days after receipt of injury at which
time wound entirely cicatized. Four
days after (Aug. 11th) began to be in-
flamed and painful, soon ulcerat-
ing and assuming a gangrenous
condition, the surrounding bloody
tissues sloughing extensively.

Treatment Tonics and good diet,
with local applications of Brome
Acid, after which parts were
washed with a diluted solution
of chloromated Soda, and poult-
crred with yeast and charcoal.
This treatment being pursued for
five days, the Brome being applied
every alternate day, at the end
of this period sloughing had ceased,
sore became clean and healthy
and soon commenced to granulate. Sore was then dressed with Ceratum resinac at first and afterwards with Ceratum Simplex. September 25 to 1823 wound of entrance is closed open and that of exit and discharging an ill-conditioned pus. Foot is enlarged to twice its normal size, skin tense and shining of a livid hue, firm to the touch and not putting on pressure. There is doubtless some diseased bone in the foot and a small amount of new osseous deposit but the hardnefr and firmness of the parts I attribute to organized lymph. I have seen repeated instances
When this condition remained for many months, I believe this to be caused in many cases by the excessive and prolonged use of cold water dipping. This member being situated so far from the centre of circulation will not bear the sedative effects of cold as well as other parts of the body, where the flow of blood is more active. By thus continuing the use of water dipping too long, the skin becomes macerated, the surrounding tissues soft and flabby, and the proper flow of blood is interrupted. In this manner the natural power of absorption is reduced and the organized fibrin
remains firm and hard for a long time.

R. F. Hamblin Priv C. C. 40th Regt. N. C., was wounded at the battle of Gettysburg July 2nd 1863 by a conical leaden bullet entering at upper portion of left ear, passing obliquely downward and backward emerging two inches to left of spine or spine of fifth cervical vertebra, six inches from point of entrance, passing through the auditory canal and fracturing the mastoid process in its course.

Patient states that he remained in a comatose condition for two days after one receipt of injury, following which suffered great pain
in ear with more or less constitutional disturbance. Received a general antiphlogistic treatment with local applications of cold water.

August 23d 1863 wounds of entrance and exit are closed. In under no treatment. There is partial paralysis of the muscles of left side of face, opens his mouth with great difficulty and to the extent of one half inch, requires considerable effort to protrude the tongue. General health good. I attribute the palsy and its accompanying symptoms to an injury of the foramen of the 7th pair of nerves at its exit at the mastoid foramen.
Rodell Packard 3rd A. 17th Reg.

U.S. Infantry was wounded at
at the battle of Gettysburg July
2nd, 1863, by a conical leaded bullet enter-
ing at triangular space of left scap-
ula passing horizontally upward
and forward lodging under the
deltoid muscle one inch below
acromion process right side,
where it was cut down upward
and abstracted July 4th, 1863 five
days after receipt of injury.

States that he expectorated several
smooth jets of blood at the time.

Treatment antiphlogistic with
simple water dressings. Came
under my observation August 5th.
The patient was pale and emaciated, eyes dull and sunkken, no appetite. Tongue brown and dry, pulse too quick and feeble. The wound of entrance is closed and that of exit is open and discharging. Coughs much and expectorates sputum and mucus. Exhibits several pieces of bone which he states he has "coughed up." During the act of coughing the air from the lungs passing through the oriifice of exit and sucks the discharge several feet. The right side of chest is sunkken to a considerable extent. No marked dulnes on percussion. By auscultation I discover a prolonged d
expiration at the top of the right lung and a precordial respiration at the top of left lung.

Treatment: Tonic and slightly stimulating with a good nourishing diet. Locally simple dressings.

The pieces of bone projected are doubtless portions of the scapula which had been driven into the lung by the ball. September 26, 1863 at which time my observation of the case ended, he was improving and will doubtless recover with whole or partial solidification and loss of function of right lung, as cases of a similar character frequently do.
William Thompson Pvt Co F 40th Regt. New York 3d was wounded at the battle of Gettysburg July 2nd 1863 by a minie ball entering at last cervical vertebrae passing upward, forward, and outward, emerging on left cheek one inch above angle of jaw. On being struck fell helplessly to the ground with a fulminating numbness in arm and shoulder. Cold water drenchings were applied. August 23rd 1863 wounds of entrance and exit are closed. Left shoulder is deprefed thus inches lower than the right.
muscle is atrophied and flabby, as is the left arm also.
A portion of the sterno mastoid is detached from its insertion and
adheres to the cavity at
angle of jaw. The clavicular
portion of the pectoralis major
is contracted and draws the
shoulder forward.

Dr. G. Cunningham, Pvt. Co B, 44th Regt. N.Y. S.V. was wounded at the
battle of Gettysburg, July 2, 1863
by a conical leaden bullet enter-
ing behind left mastoid process
passing directly upward lodging
one inch from point of entrance
destroying the bone, where it was
excised the next day after the receipt of injury. Remained eight days in a comatose condition. Treatment antiphlogistic and locally cold water drizings. August 24th, 1863 the wound is nearly closed and discharging a small quantity of pus. Has had a bath daily from 8 A.M. to 2 O'clock P.M. Bowels regular, appetite good, doing well.

S. V. S. was wounded at the battle of Gettysburg July 2nd, 1863 by a minnie ball entering anterior aspect upper 3/4 right thigh.
and passing directly through the voluminous muscles of this region, without implicating the bone. Found healed soundly by the use of cold water dressings. [August 12, 1863] and had entirely cicatriszed and could use the limb as well as before the injury. Ten days after (August 12th) cicatrix became painful and inflamed, the parts of a feverish hue, a vesicle forming in the centre; soon after the surrounding tissue became gangrenous and sloughing ensued until a space four inches in width by six inches in length was involved; the edges erected
ragged and rough and the bottom covered with a brownish case-plastic lymph. Patient febrile, weak and pale. Tongue dry, no appetite, and has considerable diarrhea.

Treatment: Fever was treated with four oz. Sip. Frumenti daily. Local applications of Bromine Acid after which a solution of chlornated soda, and poulticed with yeast and charcoal. This treatment being continued five days, the Bromine being applied every alternate day. At the end of this time the sloughing had subsided and healthy granulation
August 20th, 1863 wound is healing very fast. Has no fever or diarrhea, appetite improving. Quinine and Whiskey discontinued and is taking R. Fevershams and Linseed. Sept. 26th, 1863 wounds entirely healed and patient is walking. The diarrhea which occurred in the course of this case I attributed to the efficient matters being taken up by the capillaries about the wound and exerted by the bowels. While on duty at the U.S. Army
General Hospital York, Penn. in the summer of 1863, there were admitted July 8th, from the field hospitals of Gettysburg, 800 badly wounded men. Cold water douchings were principally used and all the wounds improved in their condition unusually well until the 11th day of August one month after admission, at this date nearly one half the wounds in the wards commenced to be painful and inflamed, and soon gangrene and gangrving would ensue. I attribute this so called hospital gangrene, every case dating its appearance from the same day.
to some atmospheric changes for every precaution was taken in regard to the use of sponges, the wards were well ventilated and the general hygienic condition of hospital well and carefully attended to.

In the treatment of this, and and similar cases I have had ample opportunities to observe and judge of the efficiency of almost every remedy recommended as a local application for hospital gangrene; and in none have I witnessed such beneficial effects as from the judicious use of Bronnic Acid. It consists
pot and promotes the speedy separation of the dead from the living tissue, thus arresting the sloughing process.

The manner in which we were in the habit of applying this agent was by inserting a small snare into the bottle of the acid and allowing its fumes to penetrate the dis eased tissue and in some cases by applying the acid itself immediately to the part.
An Inaugural Dissertation

on

The Human Encephalon,

Submitted to the Examination

of the

Provost, Regents, and Faculty of Physics

of the

University of Maryland

for the

Degree of Doctor of Medicine,

by

E. Miller Reid of Maryland.

Baltimore, Feb 6th, 1864.
We find the term Encéphalon to be derived from the Greeks ε&i, and ἔγενεν, the head. Thus literally meaning in the head, but in the general acceptance, the contents of the cranial cavity, which are the cerebrum, cerebellum, and medulla oblongata, with their investing membranes.

The cerebrum, or great brain, is the large oval mass of circumvex and medullary matter occupying the inferior and principal part of the cranial cavity, and presenting on its surface a number of convolutions, or slightly convex elevations, separated from each other by numerous depressions or sulci of various depths. It is divided superiority by a deep fissure into two equal parts, or hemispheres; each of which
consists inferiorly of an anterior middle and posterior lobe. Situated between, and connecting the two hemispheres, is the corpus callosum, or great commissure, which is a broad layer of medullary fibers, running transversely, and becoming blended with the substance of the two hemispheres. Its inferior surface forms the roof of the lateral ventricles; it is also blended posteriorly with the fornix, and in front gives attachment to the subthalamus fasciculus; laterally its posterior rounded border is the transverse fissure of the cerebrum, extending on one side from near a deep fissure (fissura Sylvii) between the two hemispheres, and from cerebro to the same point on the opposite side of the
brain. Adhering to form the inferior boundary
of this transverse fissure are the corpora
quadrigemina, or optic lobes, which con-
sist of two pairs. The anterior part is a grey
color and are called grutes; the posterior are
white and smaller than the anterior, and
are termed testes. From each of these pairs
are given off processes which pass into the
nuclei of the optic.

Beneath the great commissure (corpus
callosum) are the lateral ventricles, which
are two irregularly shaped cavities, occupying
and extending from one extremity to the
other of the interior of the two hemispheres,
and resulting from the contact of the
surfaces of a series of parts. They are sep-
ated by two thin laminae of white sub-
stance (sphenium lucidum) between which is a fissure termed the fifth ventricle. Each lateral ventricle is divisible into a body or triangular cavity, and three angular depressions called cornua. The bodies are bounded above by the great commissure, internally by the vertical partition of the two ventricles; and below by a series of parts which will now be noticed. Anteriorly, the first are the corpora striata, or superior ganglia of the thalamus, which are two gray, looking bodies of pyramidal shape: their bases being forward and inward rest against each other; internally, they are composed of gray and white substance, so intermingled as to produce a striated appearance,
whence their name. Posterior to these bod-
ies, and spreading obliquely across the 

cerebral ventricles are two vascular mem-

branes, pertaining to the nature of the 

vessels, of which they are a part, 

and communicating with each other, 

through an oval opening (from the Moustian-

~) they also enter, and help to form the in-

ferior walls of the middle cornue. Be-

tween the inferior ganglia, or corpora stri-

data, are two oblong bodies, consisting of 

medullary and gray matter; these are the 

thalami optici, or inferior ganglia of the 

cerebrum, included between them a nar-

now cavity or fissure, which is the third 

ventricle (which ventricle is crossed by 

these commissures between which are
found several foraminae. The thalami are partially united by a commissure composed of a soft gray substance; posteriorly and inferiorly they form the walls of the descending cornua, and also present several prominences (corpora geniculata extrema et interna, the former of which are regarded as the principal origin of the optic nerves.) Along the inner margins of the thalami arise a couple of medullary cords, which pass backwards to two small conical bodies, the pineal gland, constituting their bands of connection with the brain. Extending along the posterior borders of the superior ganglia are two thin fasciculi of nervous matter which connect these ganglia with the
thalamus optici. Beneath the corpus callosum, and extending over the third ventricle is a triangular lamina of substance. The fornix, which is narrow in front and terminates in two crus, which curve downward at the base of the brain, when they make a sudden curve upon themselves forming the corpora allantia. Superiorly, the fornix forms an attachment for the septum lucidum, and at its posterior extremities gives off at each angle a thin flat process which passing into the middle commissure participates in forming their inferior walls and are known as the corpora fimbriata, beneath each of which is a layer of grey matter of a serrated appearance, hence called fascicu
dentata, which also assist in forming the same walls. Near the angular depressions or cornua, the anterior of which are the angular in form and terminate in the anterior lobes; the posterior curve inward and terminate in and near the surface of the posterior lobes; in each of these cornua is a slight projection of substance called hippocampus minor. The middle or descending cornua are the largest, and change their direction several times in their course and having curved around the cornu celebre terminate near the fissure of Sylvius; they are bounded inferiorly by the median surface of the thalamus opticus; inferiorly, by a number of parts: first, the hippocampi majores, which are projections
given off by the longitudinal commissure and extend the whole length of the mid-
dle commissure. The extremities of these pro-
jections, from their appearance, are called
pedes hippocampi. Just external to this
border are two elevations, the pedes ac-
cessorii. The lateral ventricles are regular,
lined by a serous membrane which is
reflected through the foramen of Monro
into the third ventricle; from thence into the
fourth ventricle, lining its interior; it also
transudes a secretion which moistens
and protects the interior of these cavities.

Situated in the posterior division of
the skull, and beneath the cerebrum, is the
 cerebellum, or little brain, along and

flattened in form, and about one seventh as large as the cerebrum, from the posterior lobe of which it is separated, and protected from their superincumbent pressure by the tentorium cerebelli. It is composed of white and gray substance, the former occupying the interior and the latter the surface—which consists of innumerable laminae, separated by furrows varying from a line to half an inch in depth. Like the cerebrum, its first and superior division is into two hemispheres, which division is established behind by a notch which receives the falx cerebelli; and upon its under-surface, by a deep excavation which lodges the medulla oblongata. Running between its two hemispheres...
is a longitudinal ridge, the superior portion of which occupies the upper surface of the organ, and is termed the superior unciniform process; the other portion is lodged within a deep fissure (vallacea) and connects the hemispheres; this is the inferior unciniform process. Each of these processes is subdivided into smaller portions or lobes. The next division is that of each of the hemispheres of the cerebellum into an upper and lower portion by means of a fissure. The upper portion consists of two lobes, and the lower three, which are marked out and separated by furrows. From the arrangement of their white and gray substance, a vertical section of either hemisphere presents the appearance of a tree and
flee, hence denominated, an ovum, the cerebellum, in the term of which is an elongated mass of gray substance, so-called an external cortex, and called the cerebellum or labyrinth and was denominated by

Surgeons the gyration of the cerebellum.

Coming from the interior of the brain, there are two columnar or fibers which pass upward to the inner ear of the horia, a condition in which the cerebellum in their union they enclose and are connected by a medullary lamina which is the main of the incus, which forms the roof of a cavity enclosed within the cerebellum and becomes the fourth ventricle.

The ependyma, or mucous membrane of the cerebellum, is a broad band of fibers, which can be

the upper part of the medulla oblongata, and contracting on each side into a cord, enters the substance of the cerebellum, and is known as the crus cerebrum.

The Medulla Oblongata. This constitutes the third division of the central nervous system, and is that portion of the spinal cord situated within the cranium, about an inch in length, broad and thick superiorly, but tapering inferiorly towards the occipital bone. It is divided superficially by an anterior and posterior vertical fissure into two lateral columns, each of which is subdivided into several smaller columns or cords (the cerebral hemispheres were regarded by Gall as resulting from the expansion or evagination of the fibers of these columns,
and from this diverging in their course
inferiorly, were denominated by him the
diverging fibres. First, the anterior column
or corpus pyramidale; these are narrow and
convex, situated, one on each side of the an-
terior vertical fissure, which fissure is cross-
ed by some fisure from the inner border of
each pyramid; which mutually change
place or dicussate. The fibres of these col-
nunae now pass upward into the lentic
nuclei; here diverging and separating, fade
out and assist with fibres of the other
columnae, in forming the corpus callo-
sus, after which they proceed through the tu-
nici or clystici, thence into the corpora li-
tale, and having become successively in-
creased by new accessions to concentric
mater. Though their course, we observe
and ascent in forming the central corne.

Next, the middle columns. These, from
their shape, are termed corpora striata.
They are much shorter than the others,
and situated just externally to the cor-
pora pyramidales, each containing with
in itself a small nucleus or ganglionic, from
which their fibers arise, and proceeding
upward, follow the course of the per-
iches of the pyramidales, and,like them,
diverging and augmenting as they as-
cent, reach the corpora striata, after
which they also participate in forming
the central hemispheres.

Saidly, the posterior columns of
corpora neubinius. These are the largest and constitute the posterior halves of the internal column. They are separated posteriorly by the fourth ventricle and posterior vertical fissure, and, in front, from the corpora olivaris, by two small grooves, dividing as they ascend towards the cerebellum into two rounded cords which enter the substance of the cerebellum, and then are supposed to proceed through the corpora thomobideadum; after which, diverging and expanding, constitute the cerebellum.

Now these three grand divisions of the encopilation, the caudum, the cerebellum, and medulla oblongata, associated and connected by means of
Some cords, constitute the brain, which
has nine, or according to some writers
arrangement, twelve, pairs of nerves arising from it, and emerging through
the foramen at the base of the cranium. It is also invested by three membranes
first the pia mater, a thin vascular mem-
brane, which, dipping between the convolu-
tions, closely invests the whole surface
of the brain, and is regarded as the in-
ternal membrane of the brain. Cover-
ing this, is the second or arachnoid,
which is a thin, transparent, serous
membrane, investing the brain without
dipping between its convolutions,
but enclosing between it and the pia
mater several spaces which communi-
cate with each other, and contain a nervous secretion (the subarachnoidian fluid) which seems to vary in quantity, being less in youth than in old age, and is regarded as serving as a mechanical protection to the brain and spinal cord against violent shocks and vibrations to which they are frequently exposed.

Lastly, the dura mater, it is a thin fibrous membrane lining the inner surface of the cranium, and, invest ing the brain, is prolonged into the spinal column. Its internal surface is smooth from being in contact with the arachnoid, from which it receives a serous coat. It also forms several processes internally, which sepa-
state and supports certain portions of the ventricle. The dura mater is the external membrane, and, from its structure, is beautifully adapted to the protection of the brain and its more delicate membranes.

The meninges is supplied with blood by the internal carotid and meningeal arteries, which are directly adapted, forming a number of branches, while increasing the amount of friction, consequently diminishes the velocity of the current of blood, which, probably, would otherwise prove deleterious.

**Physiology of the Meninges.**

Notwithstanding the indescribable ac-
Marble, and the many experiments of eminent physiologists, the information in regard to the functions of the encepha- loma seem as yet indefinite and obscure. The most of writers, I believe, concur in believing it to be the organ of the mind, and seat of sensation, but, consisting of a series of different ganglia, the difficulty seems to be in discerning the proper function of each. The function of the central or hemispheralical ganglia appears more evident from experiments and comparative physiology than of any of the other ganglia of the brain. The effects of injuries, or of various morbid conditions of these ganglia, and the
result of their removal by operation. Indifferent as animals and birds in general are to any apparent sensation of gravity, but plunging the subject into a state of profound stupor, these impar
iing, or totally destroying the mental fac
ulties, all seem to argue conclusively
that they are destitute of sensibility,
and are the seat of the intellect; or, ac
cording to Draper, the instrument through
which the mind exerts its influence
on the body,&mdash;and is developed in acor
dance with the intellectual grade
of the animal. The respective func
tions of the various ganglia of the en
cephalon, are among those which are
uncertain. The olfactory ganglia, we

24
...and, soon, have been destroyed by means of a needle introduced through the base of the cranial sinus, without producing any satisfactory result in regard to their function, but from their peculiar development in different animals in correspondence with that of their external olfactory organs, and from the distribution of their nerves, physiologists have been led to regard them as the ganglia of the special sense of smell.

The Ophite Flacaces. These, from the experiments of Longe, have no influence on the function of seeing; but, when removing either the lenses, the animal falls when the opposite side is the one from which the
That there was removed, because that they
had a peculiar crossed action upon the
voluntary movements, and were always
posed by some, from their connection
with the posterior columns of the spi-
cusal cord, and great development in
man, to be the ganglia of cerebral con-
nexion.

High, the corpora striata. These, with
the other ganglia just noticed, are re-
garded as independent centre of ac-
tion. Their precise function seems un-
certain, but being connected by fibres
from the anterior columns of the
medulla oblongata, are thought to
have some connection with the excita-
tion of volition.
Corpora Quadrigenica. These have been noticed to be more largely developed in fishes, reptiles, and birds, in which the eyeball is very large in proportion to the entire head, than in quadrupeds or in man; and from this fact, and the result of direct experiments in producing complete blindness when the optic nerves were cut, or the corpora destrogyed, it has been inferred that they preserve as ganglia over the sense of sight.

The Corbellum. There appears to exist a great diversity of opinion among physiologists in respect to the function of this ganglion, some contending that its office is that of regulating or re-
ordinating general muscular movements, others, that it is for the perception of muscular sensation, and a third party, that it is the organ of animateness, or serial instinct, but all seeming to fail think far in demonstrating satisfactorily the precise nature of its function. But the weight of experimental evidence, and comparative physiology, seem to favor the first doctrine, or that advanced by Flourens, that it has the power of associating or coordinating the different voluntary movements.

Next, the Pons Varolii. This is regarded as the ganglion by which impressions conveyed inwardly through the nerves are first converted into con-
.scious sensation, and in which the vol-
untary impulses originate, whilestim-
ulate the muscles to contraction, for
longest observed that, when broken up,
all manifestations of sensation and
volition ceased.

Lastly, the Viscellae Oblongatae,
being a portion of the spinal cord, is
regarded as the tract of communication
between it and the brain. The anterior
portion conveying motor-influence,
the posterior, sensation; and being
the seat of certain nerves, seems to ex-
pert a commanding influence over the
functions of respiration and diges-
tion.
Phrenology.

The science of phrenology, I believe, was first suggested by Gall, who attempted to prove that the brain does not minister to the intellect as a single organ, but as a combination of organs, and it has since been advocated by Spence and others, who contend that the brain is composed of a number of organs, which have special or individual functions, and that in accordance with the development of these organs there is a corresponding increase of function, and development of the skull, and consequently, upon the inspection of the exterior of the cranium, the characteristics of per-
may be read, or certain predominant faculties distinguished; being
assumed that this specialization of function
is adaptable to the general mechanism of the system, in which particular organs
are charged with particular duties; and also that by observing and noting the peculiar developments of the cranial or individuals of known character,
and then accurately comparing with others whose characters are unknown,
we are enabled to determine the most prominent characteristics of the latter.

Lability of the Encephalon to Injury and Disease.

As well as this organ is protected by
the bony walls of the cranium, it not infrequently receives injuries of a very important character. The most common seem to be those which arise from fracture of the cranium, while from the nature of the injury, producing abnormal pressure, or driving a piece of bone inward, which impales or lacerates the encephalon, these causing an effusion of blood, or exciting inflammation, which may cause direct, by or indirectly, aftereffects, paralysis, or epilepsy. From the nature of the encephalon, and its intimate connection with all parts of the system, it appears to be more or less affected secondarily by all injuries or diseases.
The system may suffer, more especially by certain forces which affect the whole system, and consequently disturb the encephalon in a greater degree. It is also often the seat of certain morbid changes, most commonly caused by inflammation excited by various causes. The symptoms characterizing these morbid changes in the cranium are not to be relied on as infallible, for we are told that post-mortem examinations of persons who died of apparently well marked cases of inflammation or disease of the encephalon have failed to detect or reveal any morbid changes, or lesions whatever.
1864

Improvised Observation on Yellow Fever

Submitted to the Examination of the
Chancellor Regents and Faculty of Physic
Of the University of Maryland
For the
Degree of Doctor of Medicine

By
Albert T. Simmons
of St. Louis de Cuba
Yellow Fever.

Perhaps there is no disease of a tropic climate more interesting to the student of medicine than that of Yellow Fever; interesting not only in regard to its fascination, but in reference to its rare nature and causes.

Having had the opportunity of observing this disease in all its various forms by a resident of several years in the Southern States and some of the West Indies Islands, I propose to describe some of its most important peculiarities, together with a few facts which have come under my own observation. Perhaps it will be necessary to go into a minute discussion for this reason, and I am well aware that it is worth more to present the subject in its entire...
The symptoms of puerperal fever are very different in different individuals and in different cases. Yet some are the same, and the experiences in the disease. They must coexist in different ways in forming a certain combination.

The attack generally commences by a chill, shivering, pain in the head, back, and joints of the arms and legs, with or alternately, fits of heat and chill. The pulse, the state of the skin, the respiration, and expectoration, and often a change in state of general health are symptoms of it. All this frequently takes place without any warning in the midst of general health.

After the disease is fully established the patient complains of the most intense pain in the lower portion of the body. Regardless of
...In the first or active form of yellow fever the reaction has been so perfectly established the disease is very mild but occasionally in some cases the serum has caused convulsions...
At the times we feel only the offensive symptoms prevailing, there seems to be the sensation of a small diffuse in the stomach and abdomen, with the pulse from normal to right.

In either of these conditions there is acute pain and tenderness over the epigastrium, which is instantly very severe on the least pressure. Either way the stomach is said that whatever is taken into the stomach is instantly rejected, at other times food and drink can be taken with but very little inconvenience. But such is surely the case.

Generally speaking nothing whatever can be retained, and not unfrequently vomiting occurs accompanied by the most indescribable pain and distress. The matter thrown up at the stage is generally what has been taken as food, mixed with vomit-
painly with quiescent fever. The distressing symptoms and complaints set in at the head and the back of the neck. The back is often stiff and the neck is rigid. The patient becomes delirious and delirious, accompanied by deep and long sighing.

The blood in this disease undergoes important changes. When taken from a bloody source, it does not present the hilly coat, as in other inflammatory disorders, it is very hot and possesses a peculiar, well-marked smell. The tongue is generally clean, but, slightly tinged with red. The windpipe is pronounced and somewhat

...
company is at home, the disease occurs at some

times the case is the very last... 

The form of the disease through its chief
ally fatal is almost always carried to the
name of complications. When there are two
only official reactions only to be preserved
in this way, the general convulsion
all the symptoms take place and the patient
quickly recovers. But in the case of the
the convulsion shall
discovered, as is often the practice of too many
physicians all these and the symptoms will
speedily follow the most malignant eff.
the patient will suddenly and the pulse
become rapid and irregular, the tongue coated
with a dark liquor for the gums and mouth
plastered with various infecting material
will take place from the ears, conjunctiva
brunt, esophagus, secretion, and finally, death...
The disease begins with a feverish sensation, and then passes to the bowels, with a great deal of pain. The patient is listless and sleepy, with a great deal of restlessness and anxiety. The tongue is white and dry, or covered with a white film. Nausea frequently occurs from the morbid fever and other effects of the disease. The skin becomes hard and dry, and sometime the whole face, especially the cheeks, gain a deep yellow or brown color.
...tion of the disease, that a general resolution of all the symptoms suddenly takes place, and the patient thinks himself well in reality out of danger.

In 1852 I attended a gentleman at New Orleans, who, in illustrating the features of the disease, very dramatically cutting at his knee one morning. I was struck by his peculiar appearance. His complexion was pale, his eyes sunken and glazed, and the skin at the margin of the eyes was of a deep brown color. I mentioned this in regard...
te is death, and it is truly he stated that more before he had suffered considerable pain, but that it seemed he felt nothing except the cry for more then he had had very little medication to ease that. After remarked to him that 'thought he was taking the yellow fever and advised him to call in medical aid as soon as possible.' He said that he would do so in the course of the day if he found himself getting worse. Two hours after I visited and found him insensible and in a perfect state of collapse. Such cases are frequently met with especially among the lower classes. The premonitory symptoms are so slight that they readily escape attention and before the patient is aware of his danger he is utterly beyond the reach of help. On the other hand, the disease appears to advance the grade and the patient is struck down as by lightning, without the least warning.
on the sheet is at the face of disease. It is suddenly seized with a suffocating sensation of dilatation of the substernal region, with cold extremities, tremors from the head to the neck, and finally death. All these symptoms have been known to take place in the course of a few hours. Then again it may pass into the system so slowly and has it may be impossible that the patient is barely aware of its presence until the vitality of life is destroyed.

The cause of yellow-fever I have not yet fully understood. Some contend that it is produced by specific contagion spread from a foreign part to others that it is produced spontaneously by endemic maladies in confined. Of these two theories, the former, according to my observations is undoubtedly correct.

Indeed, no well convinced one of the fall of this theory that I believe that were the
while within a few to take up its course at
Madeira or in the sea during the spring season
of a perfect shade of the part one I propos
so that not a foreign vessel could enter after
solitary case of yellow fever would occur.
But on the contrary were the same agency contin
to Vera Cruz or Havana, or St. Paulo where pest
is unknown and where vegetation is always low
it would be developed in three days. Because
the causes thus always exist, it is thus endemic
and only regions northern or more limited
migration in order to develop it. What that
endemic influence is has not yet been dem-
strated. It is not heat for some of the
that climatic are exempt from it. It is
not humidity for the disease occurs less
in rainy than dry seasons. done sufficient to
be produced by misery, but this from the event
to doubt from the fact that it is so common

or at least as fatal, in those and by sections of the country as it is in the damp sections of the country where that agent is generally supposed to exist. Indeed, it is a question in my mind whether there is any such a disease as malaria. I know it is the generally received fiction among physicians, but when we come to investigate the subject its existence is not so clear. It is generally supposed to be the exciting cause of numerous diseases, and so certain is the fiction generally of the truth of this proposition that many diseases have been named malaria. But if we look at certain sections of the country we perceive that where malaria is the most likely to prevail, there diseases arise the most distressing. Such is the case in the low-swampy districts of Mississippi and Louisiana where vegetable decomposition and the effluvia from stagnant water is so great that it is even offensive; whereas in the hills there
there is not very little vegetable decomposition and no
stench or we find that fermentation, nes
ly the compartments, and common vials and fuels
the malignant or congestive type. If we are in
a prison it is reasonable to suppose that disease
ought to be more fatal where it exists in the
greater quantity; but observation proves the
reverse of this. If then, yellow fever is not
produced by heat, humidity, or any specific
thing does produce it? For my part I shall
not attempt to answer. It is useless to assume
a theory when it cannot be proven. Some
facts, however, which I have noticed may
not, perhaps be uninteresting.

During the epidemics of 1852 a man and a
man were in demand. He went to the sale of
all goods. When
they arrived himself and two clerks opened the
boxes and distributed them through the store.
In two or three days, they were all gone.
The treatment of yellow fever must of course depend upon the character of the attack and the stage of the disease.
If called early it is much easier to determine what type it may be and to answer this, much must be paired by the nature of the epidemic, and the peculiar tenour and of the patient. The apoplectic generally has more fatal health in spite of all treatment. The onset is so sudden that before medicines can be made to act the disease has done its work. The malignant inflammation, though difficult to cure, can be generally cured. The active or inductor type, if properly managed, almost always ends in recovery.

Blood letting, whether general or local, cannot, in my opinion, be too severely denounced. Whatever value it may have in other diseases, in this it is certainly inadmissible. I have seen so much of its ill effects that no authority can convince me of its value. In the above article, no malignant inflammatory
The plan which I have generally adopted is the following. Of course the treatment must be varied according to circumstances.

If the skin is cold, which is generally the case when there is much congestion, but the
The first sign that it is necessary that the
affection should be treated is the appearance of
the symptoms of malarial fever. If the
fever is not properly treated, some of the
vegetable juices combined with
calcium must be given until the body is
thoroughly cleansed. If there is great tendency
to typhoid symptoms, quinine
and iron must be given every hour or two hours
according to the severity of the case. But on the
other hand, should there be too much resolution it
must be counteracted by the application of cold
water. Sometimes it is better to give a cold bath
at once. When there is great pain in the epigastrum there is no remedy more effective than
cold water applied by means of wet clothes.
Indeed, there are some cases in which I regard it
the "third pane of the window." In the mean time if there
is tendency to black vomit it is best prevented
by the temperature of the blood, of from fifteen to twenty degrees every one or two hours according to the urgency of the symptoms.

This is an invaluable remedy. It appears to have a peculiar effect in counteracting the degenera-tion of the blood which is such a prominent symptom in this disease. In cases of its being an important remedy, combined with any other in the same class, it is very efficient in abating the inflammation of the stomach, and preventing black vomit. But it is not, in my opinion, equal to the remedial feat. of both. When black vomit takes place medicines are of but very little use. Recovery under such circumstances is very rare. The object of the physician must be to prevent such an occurrence. In some cases it is inevitable, from the very multiplicity of the attacks in others it is the result of reflection on bad treatment.
The middle cases of the disease are generally easily controlled. When reaction sets in, it lasts longer, the skin is hotter and there is more pain than in the malarial inflammatory. There is less stupor, and the yellowness is more of an orange color. In such cases it may be well to give an emetic. After it has reduced the fever by the use of cold water. This can be done in a few hours by keeping it constantly applied.

After the fever is reduced and the surface cool administer a cathartic. Castor oil, podophyllin, will be the best. If there is much pain over the epigastrium keep cold water constantly applied, and give small doses of calomel and sugar of lead, repeated every hour, or more hours, as the case may require. After the pain has subsided and the surface is cool, an occasional cathartic and a few grains of quinine three or four times a day is all that will be necessary.
Continued.

It is under circumstances, peculiarly favorable

posing that I am now enabled

from its quiet chambers, to write

a dissertation on a subject appert-

aining to Medicine, to be subm-

itted to them for examination who

stand pre-eminent among the

doctors of Europe, as my

knowledge is only theoretical. But

having witnessed wounds inflicted

upon the plains of Manana and

their treatment, I have taken for

my subject On That Wounds.
These are wounds inflicted by metallic bullets of a round or conical shape discharged from firearms of various calibres such as Cannon, Muskets, Rifles, Pistols.

In military practice, the Surgeon is more frequently called upon to treat wounds of this character than wounds inflicted by the bayonet or Sabre as those instruments during our present war.

A rational reason to have lost their affinity for each other and therefore seldom come in contact.

Gun Shot Wounds are always more or less of a
Lacerating kind depending upon
the velocity of the ball and the
distance it is thrown before striking
the object. We generally find
the part struck by the ball
derived of feeling and covered
with sough. Hemorrhages
are generally slight—until large
carotids are implicated and
when such is the case danger—
may be anticipated.

Intermediary hemorrhages and
secondary are more to be feared
than immediate hemorrhages
as the latter seldom occurs to
derange life as the lacerated
vessels contract and retard
within their sheaths and thus
the flow of blood is checked.

Intermedial hemorrhage
sometimes occurs when reaction
is thoroughly established and
proves fatal.

Secondary hemorrhage
frequently occurs from the patient
being raised from hospital
by rough attendants thereby
increasing the circulating blood
causing the coagula to be forced
away which temporarily closes
the wound. I remember
witnessing the death of a soldier
who was wounded at the battle
of Bull's Bluff and remained
at a private house for nearly a
month. I rose up with the hope
of recovery, but am being removed
to the hospital at Ershing about
two miles distant, secondary
hemorrhage occurred which produced
a fatal result.

The hemorrhage
is usually slight from a cannon
ball with the exception of the
first-gush of blood. Cannon-balls are
more to be feared when they
have partially lost their impact
than for the first six hundred
yards after their exit, as the bone
can be more easily turned from
its course. Newly crushing several
Came on different parts of the bay. Musket balls generally inflict the greatest amount of injury in large engagements especially when the battery contains Park shot which is frequently the case when the round ball is used.

The round ball was formerly in most common use but has recently been superseded by the conical or Minnie ball. This ball is regarded as the most formidable in use in consequence of it being penetrative with much greater rapidity and not so easily burned from its own
also a heaven to the part where and
cowe a greater opening yet where
it strikes the object it strikes and
causes a greater aperture.

Cartridge and Grape shot are similar
in their effect to Conical bullets
being smaller the wounds are
not so severe.

Small kind shot
discharged from a gun produce
different effect depending upon
the distance travelled before striking
the object. If the distance be great
the shot will scatter and may
penetrate beyond the place and
injuries will be done unless
one should strike the eye.
but if the distance be short then effect are more destructive than bullocks lighting upon it and hence the parts and carry everything before them out of the wound.

In some cases the clothing carried into a wound as proved to be a benefit or extraneous matter that was not aware the foreign substance to come on with. **Course of Ball**

A Ball may to texture some its reticular or course which is illustrated by a ball rebounding on water and sometimes may...
Superficial and more liable on its course thus a ball suffered on watertight since the body of animal and in deep wound to bone membrane and fascia have it from the ball from its course. A ball may enter one side of the chest or abdomen and pop up at a point exactly opposite. Instances are on record in which a ball entered the breast and lodged in the shoulder — one in particular at enucleated the humerus and lodged in the opposite thigh.

To determine the effects of a ball we must consider its momentum, force, density and...
The points of entrance and exit are clearly marked, and the line of contact is generally more curved and longer than the points of entrance and exit. Another distinguishing point is that the surface surrounding the points is generally brownish. By a foreign body caused by the line, about it is of a bluish color.
The characters we sought in both
rattlesnake are generally found
in the Eutomonacum causing the use
of the name Eutomonacum.

Many people are liable to
become during the process of care
by hibernation, exposure, and
sometimes sometimes perhaps
with attended with Carinaria
(Scorpius) and solandietes
and death, others to come

Compartment of Bulls

We observe that among first to
encourtage cheaha the bull
was flushed or pressed on the
budy. If the bull once cornered
was generally shaped like the back
in length in the body through
the arm to the exception of a
ball in the opposite direction
coming out at the point of contact.
6. Believe it or not, it has been
recorded to have occurred in
accidents of the head. Again it may
develop for two balls to reenter
the same area, the one to pass
into and the other to change and
around some important organs.
A ball may split the skull against
a sharp bone or fall outward
and one part may have been extracte
and the other may have improved
importance and become
Other foreign bodies have been
the
Some wood and earth have been found in remains and even the
bones of one soldier have been
found in the body of his Comrade.
These foreign bodies irritate the
sensitive parts causing inflammation,
continue suppuration and
hemorrhage.

Collapse

This is the first constitutional effect
of gunshot wounds and is called
hemopty, depends upon the amount of injury
and the parts affected as the wound
of the abdomen and thorax are
followed by a much more severe
shock than any other part of the
body. The Collapse sustained by
The system may be of two kinds, Mental and Corporal. The mental
soon passes away as the patient is
assumed that there is no danger, but
the latter being independent of
the mind, the depression is in propor-
tion to the injury and the part
implicated. Even a slight rupture
cannot cause a limb or a body
around the lungs, kidney or stomach
detracting the whole system. The
patient found in a depressed condi-
tion and much alarmed which is
beyond his control and in the
there is a flesh wound it may cause
amounting palpitis broken which
may be removed by a suture.
yet in some cases we can take the
activity of the heart and the state of the
limbs, and to some extent the general condition
of the body, but if the wound be slight once
the expression cannot be substance
we may conclude that some vital
organ is wounded and our operation
will be a wise one. They have
prevented during the stage of collapse
a pale face and we find the extremity
cold, pulse small and often irregular
and flitting, voice feeble.

The nature and the occurrence is the
riterion for us to judge whether
the patient should be anesthetized
immediately, but we must endeavor
to prevent the collapse from going on further.
Continued.

The first thing to remember is whether we should suffer the
plant to remain at one locality
and attempt a closer manipulation
immediately. The same

cannot be applicable to

regions and

organisms in general.

When a tree is

both more vigorous and

more mature the

point - when the base

nerves, the vessels are

enlarged and increased

in any or all - when

the joint has

an insensible condition - when it

part is perfectly necessary.
Of a short history of the integumentary and osseous tissues of the foot in the cases enumerated amputation should be performed before four months in Tumours, Tumors in Growth. It is difficult to decide in cases less violent than those above mentioned on the Surgeon must be governed by the condition of the patient and the advantages of good nursing. The disease before described is decided as regards amputation. The experience of most modern surgeons have decided that where amputation
is necessary &c. In every, (that is before any inflammatory symptom sets in, as it is attended with such less danger than secondary complica-
tions). It must be remembered that the surgeon in Military practice has many more difficult task to carry with him those in civil life, for he is surrounded by generally wounded & the casualties in warfare without shocking and carries for miles over rough roads to hospitals and frequently upon their arrival they are ordered to secondary hospitals for further treatment. It is the duty of the surgeon first to load to the safety of the
patients' life, regarded as the exercise of limits. And since the commence-ment of the unnatural war that now invades our once favored land, many limits have been sacrificed which under more favorable circumstances might have been saved, but the joint assurance that Peace with her balm- ing Ganges will some day come forth as a wreath of praise to bind their overshadowed brows for so nobly repulsing the invaders of their homes, proves sufficient solace to buoy them up in their hour of trial and suffering.
Extractions of Foreign Bodies

We should remove all foreign bodies as soon as possible as they tend to irritate, causing violent inflammatory symptoms, and because suppuration usually they are greatly inconvenient in their action such as the case it is better to defer extracting them until suppuration occurs which enlarges the wound and the efforts of pressure near the surface and can be extracted without dilatation. When it is necessary to make a cut there it should be made as much as possible with the finger so we can easily be detected.
The position of the foreign body without causing much irritation. When the foreign body is not sufficiently le mot to the foreign body, we shall endeavour to place the patient as near as possible in the position he received the wound and use the force in a gentle and determinate manner, but this should not be done when the parts are swollen and inflammation has taken place. A great many instruments have been invented to take
the position of foreign bodies and for the purpose of extracting them or ever.probe about development. Long has been numerous.
for disturbing the structure.
A pair of forceps has been invented by Coppen for extracting teeth which are frequently used with great effect, being very narrow they can slip down almost to the back. Within a shell are seen the surface of a pair of strong enamel teeth through which are several round holes. When a vessel or wound like a bubble was introduced itself in a spongy bone allowing the bone to expand and extracted by forceps it was on the place of a gain to be called crown and if this should fall some time was mentioned to India that at any time their care position.
indications for its use should not be used on the operation is so grave with danger and experience has shown that patients will recover sometimes unexpectedly from the most severe injuries.

Removal

Where there is bruising or pressure on the wound it may be treated by cold applications and pressure but if large contusions are present it is better to apply ligatures above and below the wound. Where arteries are concerned that are buried for some depth in muscule as the intramuscular it is better to tie the branches than
undress the beaten person by bringing both ends of the intermediate

Dressings

The best means of dressing a wound is to saturate some linen with oil to prevent exudation and apply a compress made of linseed to be confined by loose bandages. The inflammation is frequently subdued by cold applications. The best method is to have a basin of water and place some materials of a spongy texture into it and let it extend to the wound, hence the moisture will be conveyed to the wound as fast as it is absorbed by the inflamed part.

This application however should...
only be used so long as it is necessary to the patient. If however the dressing should be gradually removed and in doing so causing no further trouble, it should be applied once a day as some simple substance common as bread or milk, the object being to allay inflammation and retain the moisture to produce suppuration. The dressing should be removed when the moisture is absorbed and fresh ones applied. The patient should also keep the joint and his diet below, also use saline purgatives and diaphoretic. Blood letting both general and local sometimes used to relieve.
Concerning whether the patient is ill from phthisic habit and other reasons for anticipating excessive inflammation.

Wound should be seen
because it may be difficult to say
as it is very hard to diagnose the amount of injury sustained. Simple
shoots, wounds of the heart frequently
got well under simple dressing
and quiet. If the shock is produced
without depression we should use
cold applications, avoid all means
of excitement and enforce perfect
rest. If there is shock due to
infection, the lungs affected,
the physican can relieve the patient.
by bleating cold and fungus
plaster. Before we proceed
attend to with greater care to
then any other part of the body
We should remove allICLE from
the hand and use the simple inward
dressing. The site should be quite
but good.

Wounds of the Child

Those are generally of permanent
character. The patient should be
placed in beds and the wounds
should be examined and every
foreign substance is found to be
removed from the thorax. He
should breathe of moisture and
if there is much cough
Spasmodic mixture with opium may be used with great effect keeping the patients on low diet also may use Saline purgatives and locustive removers.

Wounds of the Abdomen.

There are also a very dangerous but class of injuries. They may be of several kinds, firstly those around of the abdomen; secondly those entering the walls of the abdomen; thirdly also those puncturing deeply into the cavity of the abdomen wounding the Viscera. If the stomach, liver, intestines or bladder be not injured a good result may be anticipated by proper...
treatments—such as purgations, antispasmodics, regimens, and
placers. In wounds provoking the abdomen, our main con-
depth and abdomen placing the patient in the supine
position and giving should be
swelling and from which and
occur, we must use warm forcol-
lations and purgatives.

Car should be observed rec-
using them as they may increase the
peristaltic action of the bowels
and thereby remove the danger doublt great. Chinm would then
be our main reliance, and if
enecessary to employ the bouch
winters charming is art should be
increase. The dressings should be
light. Foreign bodies should not
be searched after until situation
superficially.
Wounds of the bladder generally
prove fatal in consequence of the
escape of urine into the cavity of
the abdomen, infiltrating into
the cellular tissue producing
gangrene. A Catheter should
be passed into the bladder and
removed every few days to
prevent inoculation.
The dressings should be light
and simple, exposing
complete quietude.
A subsequent inquiry explained the cause involving the power of the ball being removed in the boiler before the use of Newton's displacement to test performance.

Respectfully submitted

I think the event

Sewan County

Virginia

1864
Inaugural Dissertation
On Diabetes

Respectfully Submitted
to the Examination of the
Prorost Regents and
Faculty of Physic
of the
University of Maryland

For the degree of
Doctor in Medicine

William F. Robertson
of
Maryland

Session 56
A.D. MDCCCLXIV
Diabetes

Systematic writers have adopted the term Diabetes from diapeira, to pass through, to express that condition in which the amount of urine secreted and passed is permanently too great. This disease is generally characterized by the excessive discharge of saccharine urine constantly running off as it were from the system. But we cannot always conclude from even excessive flow of urine that it is diabetes, for we have many other cases in which there only be a great flow of urine, while the disease may be far different from that of Diabetes, or in fact, there may be no disease prevailing at all, as the weather is capable of having great control over the functions of the skin and kidneys.
thin are also certain drugs and articles of food are known to cause great increase in the flow of urine. Hypothetical persons frequent to pass great quantities of reddish urine. We can judge therefore from this, that although the quantity of urine secreted is the most striking symptom we have of diabetes, still its most definite and characteristic symptom is a most remarkable change in the quality of that urine. Before determining we must examine most carefully the urine, and see that it is becoming loaded with sugar. The sensible qualities of diabetic urine differ greatly from that of healthy urine. Diabetic urine is of a light colour and transparent, its odour is rather peculiar, some compare it with that of tea or milk.
others to that of faint smell of apples. Its taste is generally sweet and notwithstanding its liquid appearance Drabert wine is remarkably strong, when boiled in a bell tube with an equal quantity of liquor Potassae it assumes a dark colour of a greater or less depth according to the quantity of sugar present, another test is given by Sommer in a bell tube with some of the wine you suspect of being Drabert mix enough of the solution of sulphate of copper to give it a blue tint, then add a considerable quantity of the liquor Potassae. If sugar be present a precipitate of hydracid oxide of copper falls, which is redissolved in the excess of alkali forming a dark blue solution. Drabert again furnishes us with a good and easy test of saccharine.
Wine, it was believed that the quantity of urea in diabetic urine was much reduced below its natural standard, and that the sugar was thus formed at the expense of the urea, but from late observations it has been shown that the quantity of urea is not diminished in diabetic urine but is generally, as abundant as in healthy urine and in some cases even more so. The presence of sugar conceals the urea and in ordinary tests may not be so easily discovered. But by certain modes of procedure the urea may safely be discovered and is generally found to be more excessive than deficient. The urine of diabetic persons also contains their relative proportion of saline matters, so the only essential difference from the standard chemical constitution
of the urine, is that it contains a solution of sugar. This explains for its peculiar odour and taste, it also accounts for a very characteristic property of the diabetic urine, that of its high specific gravity, which is so necessary to notice in diagnosing a case. Generally the specific gravity of the urine is inversely proportional to the quantity secreted in a given time, but in diabetes the saccharine impregnation is so strong that it more than keeps up with the quantity secreted; the specific is much higher than that of healthy urine. The quantity of urine secreted is enormous, much more than could be supplied by the quantity of fluids that is drunk, a healthy person generally passes from three to four quarts a day. Which, of
Diabetic person in the same time will void greatly that amount, patients in Diabetes have been known to void, at least forty pints in twelve-four hours, when a healthy person would not pass more than four ounces. In the same time, as though as small six pints have been known to pass from diabetic persons, in one incident, an Italian author declares that two hundred pints have been discharged in the same time. This saccharine matter which the urine contains may be obtained in its solid state by evaporating the urine, large cakes of crystallized sugar may thus be obtained. A differ from that of the common sugar, and is more somelar to that of the
crakes. The sugar is so abundant sometimes that when
over the urine may happen to fall, there may the sugar deli-
ted as the urine dries, patient have deluded it themselves
on their black stockings, and shoes while a drop or so of
the Diabetic urine has fallen, having as it dries a white
powdery spot, this may be
the first thing to cause the
Physician to suspect Diabetes
and on being told these
things by the patient, then
examine the urine Looks for
the sugar that may be disfunk-
ted urine and finds that the
patient has Diabetes, a patient
attention is sometimes drawn
to his urine by the great
attraction of a great number
of flies and other insects
which the sweetness of his urine has attracted, this of course arouses suspicion, and causes examination of the urine.

The production of so much sugar from the laboratories of the human body is surely a very surprising and singular phenomenon, for it has been proven that sugar is not a constituent of healthy urine. In his experiments Dr. Proust in his experiments states that he had never known saccharine matter to occur in the urine of any animal, and that of man no other animals such as the horse have been suspected, and an examination of this urine always proved to be true diabetes.

The next point of view that I will take in consideration is
the specific gravity of the wine, the unnatural high specific gravity of the Diabetic wine is a constant quality; this we must attend to promptly, for it is always a faithful index, not only the presence, but of the severity of the disorder. It therefore cannot be too particular about the examination of the wine for its specific gravity.

The specific gravity of healthy wine has been estimated at that of 1115 to 1125. Different authors though vary as to its natural standard, that of diabetic wine varies from 1020 to 1050 sometimes up to 1060 seldom so low as 1020. The average may be taken at 1040. Besides the quantities and qualities of the urine discharged
there are other important symptoms which I will now discuss.

So much fluid being evacuated from the body by this channel, that the other channel's for the excretion of. The skin is

so dry, hard, and unabsorbable, the patient will say he never

sweat, this is a general symptom,

but in few patients as the fatal period of the disease comes on the skin becomes unction.

The tongue are mostly costive the faces remarkable solid, and.

and raw moister, the tongue is dry, parched and sticky, sometimes unnaturally clean.

the patient also suffers intense thirst, they are constantly wishing for drink, it is only for a drop

lause to satisfy their tormenting
sensation of thirst, the appetite for food is generally great, but not so much as that for drink. The ignorant class of people who are attracted by this complaint, often wonder at their loss of strength, and think they cannot be much the matter with them since they continue to eat and drink so famously. Again various other symptoms and sensations are caused by the enormous drain daily upon the system, this is a table given showing how much solid matter is lost from the urine discharged daily taken 1040 as the average specific gravity, and the lbs. as the average quantity. The quantity in twenty-four hours would lose fifteen ounces and seven
drams, more than a pound and half of solid materials, 

Garrod after analyzing the 

wine found the quantity of 
sugar to exceed大脑 from 
half its a pound and half 
quarters, the sugar is much 
abundant that or four hours 
after, a meal, and less 
abundant when the secretion 
takes place, at the time 
much remote from the 
influence of the food, 

We are not surprised then at 
the hunger, the wasting away, 
the hectic fever, the seething stomach 
the Habel, the chilly state of the 
body, the sense of weakness, 
the excitement of exercise, all these 
are not born are present: there 
are other symptoms present, 
unawareness of the abdominal after 
meals, hardness of vision.
Redness of the whole interior of the mouth, spontaneity of the gums, and looseness of the teeth, and some degree of irritation and inflammatory edema about the external orifice of the mouth, these last symptoms generally attended to persons who are suffering from inanity, again, the spirits are very much depressed, the urine becomes foetid and offensive, the Patient is also fretful and ill-natured. With these there is an unpleasing and odious of the breath, which can be detected by some on entering the sick chamber.

Tuberculosis is generally a chronic disease, coming out at first insidiously and spreading itself under judicious management for many years, it is sometimes through few acute diseases.
coming on suddenly, and attains with some petrific disturbances
and runs a short course
uncontrolled by any treatment.
This disease proves fatal more
frequently through the supervention
of some other organic mischief,
such a debility, it often becomes
associated in its course with
diseases of pulmonary disease especially
with tuberculous phthis.
This has thought to be in some
universal, as it is so often the
case, but this is not so, as
that have been many of diabetic
patients examined in which there
was no tubercles whatever, this
disease sometimes terminates in
incurable dropsy, sometimes it
terminalis more suddenly by
apoplexy, or by some disorder of
the stomach.
There is some kind of connection
within their affections and diabetes. It usually follows certain kinds of complaint, but accompanies generally or precedes those in which the auricular disease is involved. Persons have been known to lose chronic symptoms upon the recollection of diabetes, on the contrary, carbuncles and boils have been known to accompany the disorder. Gangrene has been found to be a frequent occurrence in diabetes. There is no doubt that the vital power has been considerably lowered by the disease, and the patient is apt to sink suddenly under any mental shock, undue bodily injury, or any unusual amount of fatigue, or anxiety. He is also told that from these secondary diseases,
supervising the sugar frequently disappeared from the urine, though
this occurs. We are not to think that this is an index of
improvement in the patient's condition, but is really a warning
of danger.
When we examine the dead body, we can have but little as an
illustration upon the pathology
of Diabetes. We look to the kidneys
with much interest, knowing that
it is the principal function
of the body concerned. We find
nothing there to explain the
symptoms noticed during life.

They are found sometime hypoplasped, this though we are not
surprised at when we consider
the vast amount of work
which the glands have been
performing. We regard these
immaterial conditions as being
Consequences more than caused, in the long continued flow of unnatural urine. He took him to find out the origin and source of this strange malady. Where and from what function of the body is the source of this strangely formed sugar? It was first conjectured that it was made by the kidneys from the blood. It was naturally supposed that if the sugar persisted in the blood and only withdrawn from it by the kidneys, it would be discovered in the blood. Yet there were many able chemists sought for it there in vain, since failing to find sugar in the blood, they inferred by some new combination of the elements that the saccharine matter was actually
formed in the kidneys, these
considerations, and chemist were
both incorrect. As twice honorable
able chemist sugar has been
found in both arterial and
venous, diabetic blood, this is
detected with great difficulty owing
to its being masked with the
albumin of the serum and its
small quantity. It is reduced to
such a small quantity by its
being continually dissociated out of
the blood by the destruction of the
also through the kidneys.

In this respect the urea and
sugar somewhat resemble each
other, both being secreted
which the blood are in urine
to cast forth. Sugar had
been found in the blood by
some previous manures, but for
the full exposition of this fact
we are indebted to Mr. McGee, who by this peculiar process accomplished what many of the able chemists had failed in, which has proved very and enabled our professional men more readily to understand the origin and source of this most melancholy disease, one of whose experiments is very interesting, I will give a few lines. By means of an emetic he obtained the digested food from the stomach of two men who had partaken of food two or three hours before, one being in perfect health, the other had diabetes. Applying the chemical list, he found the food to form strongly, especially that from the diabetic one. Thinking that it was not a spurious trial he varied the experiment not allowing any
vegetable food to be taken, thinking that the sugar might be produced by the vegetable portion of the food. If he cleared out the alimentary canal by means of a purge and vomit, he then fed them exclusively on animal food for three days, then procuring the contents of their stomach, treated as in former case; the food from this healthy man did not ferment at all but that from the one laboring under Diabetes fermented very fastly. From this we could infer that the cause was direct and immediately in the digestive organ, that instead of the nutritive chyle, saccharine matter was formed by the stomach, and entered the circulation maltised. In healthy digestive there is a certain change that the food
has to endure, which is presented in Sculcher's food which would be transmitted into muscle, bone, fat and membrane. is burned out of the system, as sugar with the urine. It is also told through by M. Claude Bernard that with all healthy persons whether their food be that of meat or vegetable, not only in persons but in all animals, there is a continuous manufacture of sugar going on, the apparatus designed for this manufacture is planted in the liver, in the tissue of which sugar may be detached while every other organ of the body is perfectly destitute of it. The sugar which is formed in the liver has been accused to disappear in the lungs, or carried off by the capillaries of the general circulation.
Dr. Bernard also speaks of an artificial Diabetes, which may be brought on at will in any animal by irritating by means of a puncture a portion of the floor of the fourth ventricle of the brain, close to the origin of the pneumogastric nerves, within an hour or two after the injury saccharine matter may be found in the urine, and this will continue unless the injury done to the nervous substance is repaired. It has also been discovered that the division of the pneumogastric nerves will cause the suspension of the sugar forming functions, from these discoveries a new theory has naturally arisen respecting the pathology of the artificial disease, from it the idea that the hepatic sugar is formed in cycles and there is more than can be consumed by the lungs, or in the capillaries of the general circulation, or
the quantity of sugar formed fails, in some way to be dissipated. So, in either case, the sugar thus remaining in the blood passes at length from that fluid into the urine.

But there are two facts which strike our attention at once, as doubting somewhat with the simplicity of these conclusions, the natural secretion of sugar goes on continually to the liver of healthy persons irrespectively of the kind of food to which they may eat, whereas the quality of food has the most striking influence on the amount of sugar which the blood and urine contains of diabetic persons. It has also been found that the hepatic sugar and the sugar we get from artificial diabetes differs very sensibly from the
sugar of true Diabetes, which resembles that of vegetable sugar derived from grapes.

There is little doubt that the sugar of Diabetes is a higher quality of saccharine principle than that of the Muscadine variety.

As speaking of the outward cause of Diabetes we know but little, it not being a very common disorder, and those who became affected with it, there probably has existed a predisposing bit. Some cases the disease runs sometimes in families, and from incidents given by many authors where the disease is inherited from one family to another I cannot but think, that the disease is hereditary, long continued intemperance, immediate use of spirits and excessive labour connected with a poor account diet may
be predisposing cause, great debility and anxiety of mind are certainly predisposing causes, it occasionally seems to be brought on by the operations of some exciting cause, such as exposure of the body to cold or by drinking large draughts of cold fluid while the body is hot and perspiring. In many instances the disease has been brought on by these causes.

The prognosis of diabetes is generally unfavorable, though not necessarily so. It is a malady which, justly alarms those who are the subject of it, as its fatality is much more frequent than its recovery. Thirst seems to be less despondency felt about the disease now than in former days, whether this is because the disease is really more common
and at the same time more mild.
and more tractable than it formerly 
was, or whether there is more interest 
taking in the disease, and is more
cautiously looked for, and more
rashly recognized. Certainly we
hear of many more cases of diabetes
now than in former days, and
there seems to be more interest
manifested towards it.
Of the well marked cases a few
not many have perfectly
recovered, the natural specific
gravity of the urine has been
restored, others have gone on by
slow or rapid slips to a fatal
termination. In a few cases the
main symptom the emaciation
of the sugar has continued for
months and years without
serious diminution of the general
health, until the patient by
some other illness has been
Cut off, it would seem that when the digestive organs are properly assimilating a sufficient quantity of food to sustain the bodily fabric, other portions of the aliment may run off in the form of sugar with comparative impunity to the health. But even this the best state in which a person who remains inactive can be is a perilous one. There is a great caution in which we must guard against that is a permanent aneheresin that the plant is well, thine may be and in fact thine are many apparent recoveries and even apparent cures. This is of great importance to know. Remedies must not be considered useless because they may seem at first short of their full scope, if the medicines do not make
the patient perfectly well, that is no reason that we should despair and give up the use, they are certainly useful, for it is better to keep a man alive who has the disease if we cannot entirely cure him than to let him die from the want of medicine. There are many patients who are kept in this state of dangerous safety. There are remedies that will exercise the greatest controlling influence over some of the most prominent symptoms, and sometimes even restore the patient to such a state that will be meliorated for health by the patient and indeed the medical man unwarmed of its fallacious character may be mistaken; the urine may recede to its natural limits, and there will remain
only one merited circumstance which may, and will be easily
overlooked, if not searched
carefully for, it is the unnatural
height of the specific gravity
of the urine, as long as this
continues, the urine permanently
and deadly above its
natural standard there is
no real security; the smallest
 disturbing causes such as
exposure to cold or an inter-
ferable meal or fatigue, once
bring back the complaint
in its former severity. If these
agencies can be avoided health
may in some instances be prolonged
and much comfort for many
years.

While now take in consideration
the treatment of Diabetes,
in every case we have three
great objects to be kept in
view: the first of these is to restore the
defective power of the digestive
apparatus, whether the fault lie
in that organ, or that of the liver.
The second is to restrict as much
and as soon as possible the
supply of saccharine matter from
without.
The third is to mitigate, and
remove the most prominent symptoms,
if the first of these could be
achieved the remaining two would
be of no consequence, for the disease
which we regard as a variety of
Dyspepsia would be cured.
But hitherto, the resources of our
art have been baffled.
Our main hope for success must
lie in the regulation of the vessels;
some of the food in every case
the patient must have or he
would speedily die.
The great difficulty is in directing
a sufficient amount of healthy
stiriment for the cellular tissue
of the body. The draining away
of any superfluous sugar will
be done well enough.

The diet should be composed
exclusively of animal food,
as it has the effect of reducing
the quantity and diminishing
the sweetness of intainted wine.

The animal food furnishes but
scantily materials for the formation
of sugar. The saccharine aliment
ary principals are derived from
the vegetable kingdom and
constitute what may be called
vegetable elements. If then one can
exclude these elements and confine
the patient exclusively on animal
food, we at least without curing
the disorder suspended its worst
effects; but unfortunately not many
are capable of enduring this
mode of living. So long though as they are able to endure this, they are comparatively safe, and it is surprising to see how suddenly the saccharine properties and the quantity of urine is augmented by the least variation of the diet. A small portion of vegetable food will make the greatest difference. It is thus clearly evident that the diet constitutes the principal and most important part of the treatment. For if care be taken to exclude those articles of food which contain saccharine matter how quickly we see that the patient improves. His thirst will generally abate. His appetite becomes natural. The state of his tongue and skin improves, and his weight and strength augment.
was reduced by regimen alone from
354 to 111 fluid ounces within a
few days and the daily quantity
of sugar voided with it from
26 ounces to rather less than 42.
A patent being put upon
meat, all the raw-coal, cod-liver
oil and sandanum, the urine
sants in quantity in five days
to 311.5. and it was again to 21
upon the resumption of his
ordinary diet, he must continue
there to vary the animal food
as much as possible encouraging
the patient to make choices
amongst the different kind
of meats, game, fish &c.
And as without any vegetable
food as much ,as possible, all
kinds of fruit should be
positively forbidden, they should
be allowed but little bread and
chaf should be quite formulat
and rather state, it is also important to see that the patient does not eat too much animal food, as an inconsiderate would not only weaken the digestive organs but the patient's life may be put in danger by this undue indulgence to a ravenous appetite. The quantity of drinks should also be limited; it should properly consist of animal broths, and they be taken in moderation. When the patient has been indulged in drinks whose thirst was great, caution should be taken, and they should not be stopped at once. As sudden failure of the vital powers has not unfrequently ensued upon abrupt changes of this kind.

Numerous remedies have been proposed and recommended for this disorder, I will only consider those which
have been termed the most efficient. Bloodletting has been strongly
advocated as a very good
remedy, under small and frequent
bleeding, the strength of the
pulpit often increases, the gums
of the skin, and clamminess
of the mouth are often
diminished. Great care and caution
should be taken in bleeding
as great danger might result
from it. When too large a quantity
is taken, fatal results are on
record of this having been
caused. This measure has
the best chance of being useful
and exhibiting its power, when
the disease is recent, and
attended with some febrile
disturbances.
In chronic cases in old persons,
whenever the debility is already
very great we cannot resort
to convince, as many request or prefer; although in some cases of the bite, it is borne better than we may expect, as local blading is of great service in relieving local uneasiness. Opium is one of the best of medicines for this disorder; it quiets the nervous irritability and allays some of the most distressing sensations, and restrains in a remarkable manner the morbific prejudicium from the kidneys. It also appears to control the drug, even in the influence of the sugar in the blood, but does not banish the sugar itself but moderates the excesive discharge. In administering the drug, it is better given in the form of a powdery or chewed given aid the narcotic substance. From three to five grains of the powder may be given three
line a day. If the Speeze which
the powders contain should
not agree with the stomach
an equivalent quantity of any
other preparation may answer.
There is also another remedial
measure which has a very
beneficial influence on the
condition of the patient,
the forced perspiration.
Here are some examples given
where it was so beneficial
that we could it as one of
the most excellent remedies.
Here is one case given in which
a man was nearly well so
much improved that he
considered himself well, many
of the symptoms were
removed, but the specific
gravity of the urine still
remained about its natural
standard; the man who was
so with engaging tolerable good health, one evening very suddenly and for himself, caught cold, the diabetic symptoms soon returned connected with some turbiduous complaint, and he soon died. This is sometimes beneficial in preparing the stomach and enlivening the spirits. The curds require attention and must be kept open by castor oil, rhubarb, aloes, &c, are more appropriate in these cases than the purgative salts, which are apt to be dangerous, unless. There is another drug spoken of very highly, as beneficial in diabetes. Cresol, he cannot give anything very certain as definite about this drug. Notwithstanding it has been spoken of, as having not enough experiments given
to justify us in recommending it, the case in which Dr. Isaac speaks of, with the strict regimen of diet was carried on so the diet was deserving of as much credit as to the improvement of the patient as the cresolite oint, which was administered at the same time. The principal part of the treatment of scabieous persons is the diet they should be confined strictly to animal food, and vegetable food of every description should be prohibited.

Now as I have brought to a close my somewhat protracted and I fear tedious dissertation for which I would offer my apologies, feeling but too confident that I have far from done justice to my subject! Having chosen
from the many subjects on which I am able to give but few practical views upon, I cannot but give but what I have collected theoretically from the many authors upon this disease. I must, however, I trust my impressions have been overlooked with an indulgent eye.

Before taking my friend's advice I would first relate a slight reed of parrhesia, and my most sincere thanks to the Professor of the "University of Ireland" and also to my preceptors for their unremitting and constant to inculcate their beneficial doctrines into a mind perhaps too inattentive. Also one of their numbers has been called from his sphere of usefulness by an all-wise Dispenser, never more will his instructive voice be heard on the Halls of Science.
Now more than ever do I feel...
spent with the love I have once more
land in the Bullrun Delicacy
I will always look back upon with
pleasure, and this shall ever be
treasured among the most happy
denominations of my life.


A

Lecture on

Prolog

Submitted to the Examination
of the

Faculty of Medicine of the

University of Cambridge

for the degree

Doctor of Medicine

Lambert

1807
A visitation of this dreadful affection is very seldom experienced without the occurrence of symptoms to warn the patient of its probable approach. There are but few instances indeed of any kind of severe disease occurring without some premonitory symptoms, but they are not often so unimportant as those which indicate the tendency to sickness. To the physician such symptoms are of much more importance than those of the peripheral and thereby accordingly require the most serious attention from the physician.

In order that the premonitory symptoms may be made clear, they may be arranged according as they affect the head generally, the external senses, the internal senses, or the organs of voluntary motion.
To the first class belong pain in the head, generally a dull pain with a sense of weight, but occasionally a more acute pain accompanied with the feeling of the head being bound round by a cord or wire, giddiness, particularly on standing or any attempt to turn the head, quickly succeeding throbbing of the temporal arteries. To the second class we find, transient deafness, ringing in the ears, epistaxis, obscur vision, and transient blindness.

To the third we find, stupor, drowsiness, incoherent talking, a state resembling intoxication, disturbed sleep, failure of the memory, and loss of temper. To the fourth we find, twisting of the mouth, falling of the eyelids, numbness and weakness of all limbs, drooping of the lips, and...
After experiencing one or more of these symptoms for a longer or shorter time, the patient falls into the a somnambulistic fit. Most usually in a somnambulistic fit, the patient falls down suddenly deprived of sense and motion and lies like a person in a deep sleep. The patient is insensible to all the emotions of his medical attendant and the anxieties of his friends. That feature of the disorder which most immediately impresses itself upon the notice of the observer is the suddenness of the attack and being so very general the disease has from this circumstance in all ages moved its name.
An acute form of a dissecting aneurysm commences by a sudden attack of violent pain in the head, accompanied with paleness of the face, sickness at the stomach, vomiting, and transient loss of recollection. The patient in some instances falls down in a state resembling syncope, but recovers in a few minutes and is able to walk about. After a few hours the pain in the head, continuing, he becomes delirious and gradually sinks into a profound coma. Dissecting aneurysms of the third kind, begin with a sudden attack of pain on one side, with loss of speech, which after the lapse of some hours passes gradually into apoplexy.

There are certain phenomena presented during the continuance of the aortic aneurysm which merit the attention of the physician.
The face is generally pale, the corners of the mouth glazy and the pupils commonly dilated. The teeth are closely clinched and the power of swallowing though seldom wholly lost is for the most part so much impeded as to oppose the most serious obstacles to the administration of remedies. The bowels are torpid as is usual in all cerebral obstructions and they resist the action even of the most powerful cathartics. The blood drawn from the arm the conglutinum is commonly brown and in most instances bloody. The duration of the disease varies from two or three hours to as many days. Thirty hours may be called the average duration of the disease. Cases of sudden death from brain injuries...
are on record, but in many of these lime grounds to suspect that the immediate cause was to be found in some affection of the heart or large vessels in its immediate neighborhood rather than in injury to the brain. Genuine apoplexy commencing in the manner described, and attended with all the symptoms just enumerated almost always ends fatally. Then a recovery either perfect, temporary, or partial takes place it will usually be found that some of the more decided evidences of perfect coma have been wanting, the patient has given evidence of feeling when his limbs are grasped, or the lancet-needle, the patient has oozed in a certain degree the stimulus of light, the mouth has not been firm,
closed, nor the power of swallowing wholly lost, there has been no foaming at the mouth, nor convulsive breathing, nor were the pulmonary symptoms strongly marked.

Under such circumstances our prognosis may be somewhat more favorable, though it should even then be guarded by the reflection, if recovery does take place, it is seldom complete. An irresistible drowsiness may remain or the memory wholly or partially fail or an imbecility of mind approaching to mania may be felt. In every case where a decided apoplectic fit has been experienced, a relapse is to be dreaded, and the recovery from a second attack is a rare event. If the disease last for more than one day it is generally incurable.
Resuscitation after apparent death sometimes occurs after asphyxia, we should be cautious there-fore with regard to burial. The opportunities which the fatality of this disease has afforded to the physician for extending his researches into its nature and seal has not been lost; and we have accordingly a most extended record of the appearances found on dissection in asphyctic cases.

Blood extravasated in some part of the subch-ondreum is by far the most common appearance, and is that which is generally to be antici-pated. This extravasation of blood may take place between the membranes of the brain, on its surface, at its base, or in the midst of its substance, and the violence of the symptoms depend partly upon
the quantity and seal of the extravasated blood. In other very usual appearance in those who die of apoplexy is the effusion of serum, either upon the surface of the brain or within the ventricles. In other cases we meet with turgescence of the smaller vessels or of the pia-arachnoid sinuses of the brain, but without effusion either of blood or serum. These are the common appearances presented of those who die of apoplexy and with all this there are cases in which the head presents nothing morbid or uncommon, and under these circumstances it is supposed that effusion may have taken place but in a degree so minute as to escape observations, or that the appearances may have existed but were overlooked in the hurry of examination, or that there may have been morbid
Phenomena present during life which happen before dissection and again it is reported that in some parts of the body, the face, the head, that the cause of death existed and which by close examination might not been found out. The general tendency of these arguments are disproved in particular cases by an extended survey of the organic derangement of the brain and nervous system. Some medical authors the latter opposition to phenomena have attracted much attention and many contradictory opinions have been brought forward who reference to it. In aphantic subjects we find certain confirmations of the end which attract our attention. A large head, a short neck, such a fluid conclusion. But shoulders. Short-
statue, with a tendency to confluent use.

The leading features of the apoplectic picture,
it sometimes is sometimes met with in the

 Certain periods of life have a bearing with
regard to this disease as it is chiefly
brought on between the fortieth and fiftieth
year, as the advances the tendency increases.

In early life it is rarely met with but
cases are recorded between the thirtieth and
fourtieth year. Such habits of life as tend
to produce plethora generally to drive the
blood in more than ordinary quantity upon
the vessels of the brain or to prevent its
free return to the heart have a tendency
to apoplexy. Hence it is that all living
spiritual intoxication, sedentary pursuits, too
great indulgence in sens, intense and long continued thought, too great indulgence in sexual intercourse, have always been accused of leading to phthisis.

It is held by many that the liability to the disease in aged persons is owing to an ossified or otherwise diseased state of the coats of the cerebral arteries. We acknowledge that the rupture of a blood vessel within the cranium may originate from a diseased state of the coat of the arteries, we must not forget that in probably a larger number of cases it is mere the result of a morbid action of respiration similar to that which takes place in scrofula, a bilateral exercise, distention of the stomach,
It may, on the other hand, be the result of a toxic effect, the use of wine or spirits, or the evaporation of a cold. The local effects of congealing, shrinking, and distension of the vessels are the principal exciting causes of death.

Local and cold in an extreme degree may excite a Labour. A paralytic attack occasionally occurs in fever, smallpox, consumption, hooping cough, and more frequently in organic disease of the heart. A long course of mercury, opium, tobacco, or the inhalation of carbolic acid gas may tend to produce it also.

As to the proximate cause of apoplexy, it must be acknowledged to be of no small importance. "Blooded circulation, effusion, and pressure," are the conditions concerning...
its terminale cause. [Page 15]
And to the
absolute state it be usual to infer a
probable condition of the system.
Opinion of blood within in the cranium
may take place in the veins of connective,
in the cunous of the brain, of the bone matrix, and in
the medulla oblongata, in the corpus callosum,
in the ventricles, on the surface of the brain
and in the pine mental, and in the cavity of
the arachnoid, between this membrane and
the dura mater, and outside the dura mater and
the cranium. There exists a medical belief that certain parts of the
brain are much more liable to complaints
than others, the corpora striata and
optic thalami are the parts in which the
past hemorrhage of cases has occurred.
As to the treatment of a disease, few are but few cases which require the same management for it must be carried according to the age and constitution of the patient or the saveness of the attack.

In the actual consumption of any lung, the patient should be moved into a delicious apartment, the cool air freely admitted around him, his head should be raised, ligatures of all kinds especially around the neck should be removed and the legs and feet may be placed in warm water. A strong disease with active determinations to the head, full bowing, jabs, and carbolic beating strongly, require a soothing remedy and cold-sitting rub at all times been resorted to as holding.
out the best practiced. It was today
bound to be employed. The most
medicinal means can reasonably be expected to
select a cure but there are no grounds for
believing that with common caution the danger
of the patient is increased by it.
As one would certainly venture to advise,
repeated and indiscriminate abstraction of
blood without reference to its effect on to
any of those rules by which we regulate
It is advisable to try first—in other cases.

This would be a plausible conclusion but—
at the same time, the student would ask why—
Blood-letting is the only efficient remedy in pneumonia, and he would not be discouraged from it or any theoretical notions.

The observations of many practitioners who have disposed the employment of Blood-letting tend rather to establish the dangerous nature of the disease than the impropriety of the practice. It is true that—
the blood which has been actually extravasated cannot be removed by Blood-letting, but—
we may prevent further effusion and butt general congestion. In slight—
cases of abscess we may by Blood-letting reduce the excitement—and tension of the
rescold within the mind and pass into violent delirium altogether. Therefore, on the first attack, blood should be drawn from the arm to the extent of one or two ounces and this should be repeated in four or five hours afterwards unless any unequivocal symptoms of amendment have appeared.

The propriety of bleaching the bleeding further must be determined by the peculiar circumstances of the case. It should be borne in mind that from five to eight pounds of blood have been taken from a person by no means robust when the disease began to yield. At the same time, attentions must be paid to the constitution of the patient, and it must be borne in mind that a practice

...
confined in its humor, and solid connection, would probably be detrimental to an animal subject with placed muscle, cold extremities and a small thready pulse. It was once claimed by some writers that swellings of the body, doubled and irregular and intermittent palpitation are the effects of congestion on the brain, therefore as a general rule, it is proper to bleed in every case of obstruction.

The advantages of achieving the terminal arteriosus or the jugular vein in preference to bleeding from the arm have often been insisted on at apparently without sufficient reason. It is enough that the evacuation be made in a full stream and carried to such an extent as to affect the system. By this from the mode of the relief is a powerful means of relieving
tension within the cranium and of an anas-
thetic may be resorted to in a plastic cases
with a fair prospect of advantage.
In some constitutions it may even supply the
place of general blood letting.
The violence of the attack, the duration, the effec-
t of previous evacuations, the abundance
of the blood if icy or otherwise, the state of
the circulation, the relief of the headache, the
removal of the flushed face, and the restoration
of reason, all indicate when a sufficient
quantity of blood has been taken.
In the application of blisters the greatest
caution is required as they can only be ob-
tained with safety to the calves of the legs and ankles
when blinding has been sufficiently realized.
The patient may be placed of convenient in
nearly sitting posture the hind legs and the
legs hanging down. The administration
of brisk drastic cathartics are attended with
the best results their derivative action being
a powerful means of relieving constipation, the
crushing of teeth, and the paralytic
state of the organs of digestion after
under their administration extremely difficul-
ter. Croton oil is the purgative gen-

erally used though by some practitioners
Calomel and jalap are also given, and
considered one of the best purgatives
that can be given. Hot water
will also be found to be beneficial.
Cold applications to the head, as iced water
or by dousing a small stream of cold water
on the scalp occasionally have been found to be
advantages in some instances and are certainly preferable to Bister.

When an attack of dyspepsia is known to follow habitually if the stomach is loaded with indigestible food an emetic of the sulphate of zinc may be given as it evacuates the stomach with the least possible straining and is therefore preferable to other emetics. These are the only powerful means of generally acknowledged efficacy which we possess in the treatment of dyspepsia.
to and of leading —— more means or experience —— are calculated to avoid the longer —— receive them daily regular exercise, and while —— some artrovers, spirited and determined, concern —— the patient, to the utmost manner or —— from attested to on, and it is established a drain or means of an illness or illness are the means on which his chief reliance —— should be placed.

Immediately after it, the diet should be essentially one; it is recom —— mended by some authors, that the patient —— should be without food entirely for several —— days except a moderate quantity of lean meat.
Diet. It exercises good restraint, as
habitual, quantity, mulling great quantities, making
part of life, not only stimulating drinks as wine, tea, or coffee late in night, all sudden
emotions as grief, anger, or joy, may
immediately the meat not well done.
When the patient has any uneasiness in the head, then may be taken a cup of
boiled water from the kettle or the pot of the
kettle. We must see below. Left column.
He adders is a good stimulant.
In those cases which arise from
a combination of some disorder.
The cause of abnormal fever is constitutional.
Abnormal heat from the sun, or pho-
and motion is generally written of such
writer.
An Inaugural Dissertation,
on
Acute Peritonitis.

Submitted for examination,
to the,
Regents, Provost, & Faculty,
of the
University of Maryland
for the
Degree of Doctor of Medicine
by
James Smith.

Feb'y 24th 1864.

Baltimore, Ind.
To.

Prof. Saml. W. Chew, as a mark of respect, for his kindness, and urbanity to the Medical Student,

His great eminence as a scholar, His Christian and social virtues as a gentleman, this sincere effort is most affectionately ascribed by the Author.
Acute Peritonitis.

In accordance with established rules of the University of Maryland, I have selected for a thesis the theme of Acute Peritonitis, a disease which for years has baffled the most skillful treatment. Until progressive science, and perfected pathological research, have thrown such a light upon its character and treatment, that death is the exception, and not the rule.
The Peritoneum is an extensive complicated seromembrane,
Which extends from the dia phragm, (including the cavity of the Pelvis, which forms its lower part,) to the Levatores Ani muscles below, and from the Transversalis muscles in front, to the spine, the Quadratus Lumborum, and Iliocostalis muscles behind.

This membrane like all other serous tissue is peculiarily subject to inflammatory action, especially in parturient women.

The exciting causes of the disease in question are mainly exposure to cold
and external violence, the formation of ulcerations, which perforate the intestines, and permitting the contents of the alimentary canal to escape into the Peritoneal cavity, extravasation of urine into the Peritoneal one, and a peculiar poison, with which the blood of the patient is far too often inoculated, by the hands of the accoucheur, which are of necessity brought into contact with the urine fluids of the newly made Mother.

Peritonitis is much more
rose as an idiopathic affection among children, than adults, for which Dr. West, in his work on diseases of children, seems to assign the following reason: in speaking of Peritonitis he says, "The tendency of inflammatory disease in children appears to be to attack the serous rather than the serous membranes, a fact of which we have the following illustration, in the comparative rarity of acute pleurisy in the child." That form of Peritonitis which gives rise to adhesions between the intestine, and
the pouring out of serum and lymph into the abdominal cavity occurs during intrauterine pregnancy, and results in the death of the fetus. We are not certain to what cause to attribute this form of the disease, but we are inclined by some of the best authors to believe, that it is referable to traces of Syphilitic poison, or other Venereal Taint, in the Mother. 
Dr. West relates the only case of Peritoneal inflammation in early infancy, which had fallen under his observation.
The case was that of a child, (boy) five weeks old, whose mother had been twice confined with still-born children; this child began to have the smuttes at the age of three weeks. In a short time after copper colored sores began to show themselves about his face, his serotum nept became rose, and his voice husky; lips cracked, at the end of the fourth week, he began to be sick, his abdomen enlarged, and grew tender; the child was emaciated, the skin of his face wrinkled, and his
general appearance was that of
distress. His mother, who did
not suffer at that time from
any diphylitic symptoms, was
put upon a mild mercurial treat-
ment, combined with Polyapue-
Codi, and Saraparillae.
And the Ylang, cum Cretum
administered to the child.
By degrees the spots disappeared,
the abdomen grew less swollen
and tender, and the infant
regained perfect health.

Exploration of the abdominal
region may be made by the
senses of sight, hearing, and touch.

By the touch we learn the
existence, and size of tumor, deter-
mine their quality, whether fluid or
solid; movable or fixed, painful or
indolent; hard or soft. The
exploration by this method is often
refined by means of auscultation;
thus with the stethoscope we are enabled to decide the
important question, whether or not
a pulsating tumor be abdominal
or not.
Acute Peritonitis is usually ushered
in by strong and well-marked
symptoms, viz. chills or sharp
flecks, pain in the abdomen,
increased by pressure, and
attended by fever; a strong hard
pulse which often becomes weak and feeble. The pain is increased when the patient sits up, by his drawing a long breath, coughing and sneezing. It is sometimes circumcised, but it soon becomes diffused over the whole abdomen. Even while it is thus restricted, pressure will increase the suffering, for the reason that it is a short one like the Peritoneum you cannot apply pressure, without compressing the whole cavity. The patient is found lying upon her back, as she cannot without increasing her suffering lie in any other posture.
with her thighs spread upon her
Pelvis in order as much as possible
to recur the abdominal muscles.
She lies still from the fact,
that movements of any kind,
increase her now almost inco-
herence brains.
The respiration is quick and shallow,
because the descent of the diaphragm,
in inspiration, presses upon the
membrane, breathing is performed
by the Intercostal muscles, and
the abdomen remains motionless,
this is a strong diagnostic sign.
Unles the patient be Hysterical when
found with the above mentioned symp-
toms, it may be safely presumed th"
The suffer from the formidable malady of acute inflammation of the Peritoneum. The pain which generally accompanies this disease is sharp and lancinating in its character, and is often much aggravated at intervals. The tension, and swelling, in the early stages are tympanitic; this is made known by percussion over the abdomen. Enlargement sometimes occasioned by the effusion of serum, or the burning of a tumor. It was thus that the Great Emperor Napoleon died. The presence of such an effusion is revealed by palpation, showing fluctuation in the abdomen.
The prospect is usually unfavorable. As it advances toward a fatal termination, the abdomen is not unfrequently much distended, pulse frequent and feeble, countenance expression of much anxiety, and ghastly even sweat, shade and the patient expires by asphyxia, death beginning at the heart. Sickness and vomiting sometimes accompany the other symptoms; when stranguary occurs, that part of the Peritoneum which is reflected over the bladder is thought possibly to be involved. Inflammation of the part in the region of the Kidney, may according to Dr. Abercrombie effect suppression of the urine.
Having given as correct an account of the causes and symptoms of Peritoneal Peritonitis, as I am able aided by such authority, as Dr. Tailor, West and Abercombie, I come next to the consideration of the remedial or curative treatment.

And first, as in all adhesive inflammations of serous membrane, I mention the great benefit to be derived from bloodletting. This is of the highest importance, when at all necessary, that this agent should be resorted to at an early period. Nor must we be alarmed to remove from our daily in this respect on account of the
smallness of the pulse, because this quality is characteristic of inflammation within the Abdominal Cavity. Tonic or bleeding by leeches is more efficacious, in this than other abdominal inflammations. Cupping is prevented by the tenderness of the Abdomen. In adults, after bleeding from the arm until approaching syncope shall mark the impression made upon the circulation; it is highly recommended to place from twenty to forty leeches upon the abdomen.

Our second remedy, which by some has been called the sheet anchor in many diseases is
Mercury, combined with sedative doses of Opium. Cold applications are also very soothing. The application of turpentine strips is often of great advantage to the patient. When the abdominal tenderness has been increased by blood letting a warm poultice, or a warm bath may be directed with hopes of affording much relief.

Should the case terminate favorably, the convalescence must of necessity be slow and tedious.

When we have governed the inflammation, the next indication is to support the
patients' strength, by the employment
of broths, wines, animal broths and
fermented substances with
milk. Being cautioned however
with regard to the administration
of solid and indigestible food.
All of which is most respectfully
submitted by.

F. Emory Smith
A. Thesis
on
Gun Shot Wounds
Submitted
To the
Provost, Regents,
and
Faculty
of the
University of Maryland
For the
Degree of
Doctor of Medicine

By-

Alexander Rutter

of
Baltimore

md-

February 1841
"Wis by magic art, the youthful mind,
I trained to cut, the springs of life to find,
To wield the saw, the glittering blade to ply,
And this accomplished, teach the man to die."

Gun Shot Wounds

Are produced by hard, obtuse, metallic bodies, projected from Cannons, Muskets, or other species of Firearms, with those it is usual to comprehend those wounds, arising from the explosion of Shells, or the violence with which pieces of stones from Ramparts, or splinters of wood on board of ships, are driven about. They are the most considerable wounds of the Contused Kind, and what is paid of them, will apply more or less, to all Contused wounds, according to the degree of contusion.

The excessive contusion and violence observable in Gun Shot wounds depends upon the rapidity with which the bodies occasioning them are propelled.

In general Gun shot wounds do not bleed much, unless large
blood vessels be injured, their 
considerance is often livid, 
and the shock that attends their 
infliction, or the injury done to 
the nervous, may occasion in the 
limb or part, a kind of Torpor, 
sometimes extending to the whole 
system. But no invincible train 
of symptoms can be laid down, as its necessary concomitants, on 
account of its differing so materially 
in different men, and the 
appearances are so various according 
to the nature of the part wounded 
and the greater or less force, with 
which it has been struck—

When a Musket or Pistol ball, 
has struck without injuring 
any material blood vessel, we see 
a hole about the size of, or 
smaller than, the bullet itself, 
with a mere or less discolored 
life forced inward, and if it has
passed through the parts, we find an eviuated edge, and a more ragged and large orifice, at the point of exit. The hemorrhage in this case is very slight, and the pain insensible. If the ball however has torn a large vessel, the hemorrhage will be profuse, or the pain severe, and the power of the part lost.

Some men will have a limb cauterized off, or shattered by a ball, without exhibiting the slightest symptom of mental or corporeal agitation, while a deadly pallor, instant vomiting, profuse perspiration, and universal tremor, will seize another on the reception of a slight wound.

In gun-shot wounds another circumstance is observed, which is often remarked in other cases. That when a large artery is
partially divided, the bleeding is
more profuse, than when the
vessel is completely severed.
Cannon and musket balls sometimes
produce dreadful degrees of injury,
without occasioning any breach
of continuity in the integuments.
The muscles and bones, may
actually be crushed, and broken to
atoms, without the skin being
wounded—these have been very
erroneously termed wind contusions.
The mischief attributed to the
dam is occasioned by the ball
itself, and the injury is to be
ascribed, to the oblique direction
in which it strikes the part:
or in other instances, having lost
its momentum, and acting
principally by its weight, being
what is called, a spent ball—
Observation teaches us that balls
which strike obliquely, are reflected,
Though impelled by the greatest force, and the body struck may be as soft and yielding as water, this alteration in the course of the ball, not only happens on the surface of the body, but also in the substance of a limb which it has entered, thus a bone, tendon, etc., may change its direction. The causes of pain of the peculiarities attending gun shot wounds, one to be sought among the laws by which moving bodies are governed, the form, the momentum, and the direction of the shot which is received, the position, and variety of structure in the part receiving it, must be considered, in order to account for the effects which it produces.

A ball striking a body may cause four kinds of injury: 1st. It may only occasion a contusion, without
puncturating the part, 2nd it may enter and lodge in the substance of the part, in which case there is only one aperture. 3rd it may pass entirely through, then there are two openings, one of entrance the other of exit of the ball, in the former there is more contusion than in the latter. 4th a cannon ball may tear away a whole limb.

Gun shot wounds differ much according to the kind of body projected, its density, and the parts wounded. The projected bodies are mostly bullets, cannon balls, pieces of broken shells, and on board of ships, splinters of wood. On account of the contusion which the parts suffer from the violent passage of the ball through them, there is commonly a part of the solids surrounding the wound deadened—which is afterwards
thrown off in the form of a plough, preventing such wounds from healing by the first intention and making most of them necessarily suppurate, though this is not always the case—foreign bodies more frequently lodge in Gun Shot wounds than any others, and are commonly of three kinds—1st Peices of clothing or other things which the ball forced before it into the limb of the ball itself. 2nd Loose splinters of bone, and are the cause of numerous unfavorable symptoms, by irritating sensible parts, and exciting pains, inflammation, hemorrhage, large suppuration, &c. The more primary and pointed they are, the more likely are they to produce these evils. The great obliquity, and length of the fissures, produced in
the Cylindrical bones, by Muskett balls are such as are not
remarked in common cases of
Fractures—When the ball strikes
a bone, the concussion produced
is another cause of bad symptoms
to be added to those already named.
When slight its effects are
confined to the injured limb—but sometimes they extend to the
neighbouring joints, in which
they produce inflammation, abscesses.
A curious effect, occasionally
follows Gun-shot wounds, viz.
inflammation and pufification of
some internal organs, especially
the Liver—According to Mr. Guthrie
many patients in the Peninsula
who had undergone, secondary
amputations for Gun-shot injuries
were destroyed by affections of the
Lungs. Such as—The same surface
of Gun-shot wounds, being often
more or less deadened, they are
late often in inflaming, from
this cause also. Gun-shot wounds
frequently cannot be completely
understood, in the first instance
for in many cases it is impossible
to know, what parts are killed,
whether, bone, tendon, or soft part
nor can this be ascertained with
the plough separator, which often
makes the wound more complicated
than was previously imagined.
For very often some piece, or
a part of it, or a part of some
large artery, or even a bone has
been killed by the violence—
If a portion of a large intestine
has been wounded, the contents
of the bowel will begin to come
through when the plough separator
or if a portion of a large blood
vessel be destroyed, a profuse
and even fatal Hemorrhage
may occur, when the plough is detached, although no great quantity of blood may have been previously lost.

When a ball moves with little velocity, the mischief is generally less, the bones are not so likely to be fractured, the parts are less deadened &c. However, when the velocity is just enough to splinter a bone, which is touched, the splintering is generally more extensive, than if the impulse had been much greater, in which case a piece is more likely to be taken out.

When the ball moves slowly, it is more likely to be turned, by any resistance, if may encounter in its passage, through parts, and hence the wound is more apt to take a winding course. When it enters a part, with great
velocity, but is almost spent before it comes out again, in consequence of the resistance it has met with; there may be a great deal of ploughing about the entrance, and little or none about the exit, owing to the different degrees of velocity with which it traversed the parts.

In some cases of Gun-shot wounds, the openings are diametrically opposite each other, in others they are not so; the direction having been changed by the resistance met with. Dr. Jenner mentions as an instance, in which a ball entered near the Pommum Adams and after running complitely around the neck, was found in the very orifice, in which it had entered. This occasional sort of balls is of very frequent occurrence.
trauma from a direct line by
the least resistance—
the yellowish, livid hue around
Gun shot wounds is a part
of. Echymosis, or extravasation
of blood. The injured member
is often benumbed and stupefied,
and when mortification, occurs
it spreads with extraordinary
rapidity. When the whole system
is thrown into this kind of terror
the most fatal consequences
are to be apprehended.
In cases of Gun shot wounds
pyncope. sudden shiverings, and
nervous symptoms are not
infrequent—
When there is only one opening
we may infer. the wound
contains a foreign body, an
exception to this occurs however,
when a ball instead of tearing
the clothes. or linen, carries a
portion of them, in the form of a pack, into the wound, and when they are withdrawn, the balls fall out. It is possible for a ball to be stopped immediately on entering the body, and then to be ejected by the elasticity of the parts against which it strikes as the Cartilage, Ribs, etc.

When there are two apertures made by one shot, the ball has escaped, but pieces of clothes, etc., may still be lodged in the parts. Care must be taken, however, not to confound with these cases other, in which the plurality of openings has been made by different balls.

It is not an uncommon thing for a ball in striking against the sharp edge of a bone to be split into two pieces, each of which takes a different direction, sometimes one piece
remains in the place where it struck, while the other continues its course through the body. The most frequent examples of the division of bullets are produced by the ball striking against the spherical surface of the cranium; it sometimes happens that one portion of the ball enters while the other remains without the cranium or passes over its external surface—Not unfrequently in these injuries the balls are lodged between the two tables, in some instances much flattened, in others without their form being changed—From these facts it must be evident, that even when a gun shot wound has two orifices the surgeon cannot be certain, that the bullet has not been divided, and that no portion is lodged, unless the entire ball happen to be found—
They are also highly important in a Medical Legal point of view, because foul play has been suspected in Duels, where two pieces of a split ball have been found, and Surgeons called upon to decide the charge, whether two bullets were placed in one barrel of the weapon or not.

It has been long known, that a limb may be torn or shot off near to the trunk of the body, and hardly any Hemorrhage occur—Sometimes after these injuries, the Arteries do not bleed in Amputation. Sometimes the contusion produced by a Cannon ball, or the passage of a bullet in the vicinity of a large Artery, seems to cause a laceration of the inner coat of the vessel, and a subsequent obliteration of its cavity by the effusion of coagulable lymph—
As the ends of the torn vessels are
contused and compressed; thin shot
wounds, have at first, less propensity
to bleed seriously than other wounds,
unless vessels of importance happen
to be wounded; in the beginning
there may be even little hemmorhage,
though a considerable arterie be so
burst, that it afterwards ploughs
and a dangerous, and oftentimes blinding
take place.
Angular uninjured bodies, such as pieces
of iron, cut leaded produce far
more dangerous wounds, than round
bodies, like leaden bullets.
Wounds occasioned by small shot
are frequently more dangerous
than others produced by larger balls,
because their track is so narrow
it cannot be traced, nor the estraneous
body, itself extracted. Such a shot
often injures a mucus, where there
is not the smallest external symptom.
of the occurrence, sometimes great part of the danger, also arises from the number of shots which have entered.

Having considered the causes, symptoms, and complications, of Gun shot wounds, with some of the leading peculiarities attending their infliction, I shall next note some general rules in regard to their proper treatment. The first thing in the treatment of a Gun shot wound in one of the extremities, is to determine the necessity of immediate Amputation, or to vindicate the cure of the wound. When a bone, especially at a joint, is very much shattered, and the flabby parts, particularly the great blood vessels and nerves are lacerated, when the whole limb has suffered a violent concussion, and is cold, and senseless, there is no hope of preserving it. In this case the Surgeon should
Amputate at once, and not to delay till inflammation, fever, and a tendency to mortification, come on.

But besides the violent degree of injury, in which Amputation is obvious there are several lower degrees, in which it is often a difficult thing to decide whether the operation be necessary or not. Here the Surgeon must look not only to the injury, but also to the patient's constitution, and even to external circumstances, such as the possibility or impossibility of procuring good accommodation, rest, pure air, and attendance. There are no general rules applicable in every case, and the Surgeon must consider the peculiar circumstances before he decides. The grounds against the operation are, the pain which it causes at the period when the whole system is disorder by a terrible injury. The
Privation of a limb, and frequent examples, in which nature aided by judicious surgery repairs the most horrible wounds.

There are some reasons laid down in favor of the operation, by it the patient gets rid of a dreadful contused wound, which threatens the greatest peril, and which is exchanged for a simple incised one. The pain of the amputation is not of more moment, than the pain which the requisite incision, and the extraction of foreign bodies would cause, in case the operation were abandoned.

If an operation is deemed necessary, it should be performed immediately above the wound.

In regard to the dilatation of wounds, should amputation be deemed unnecessary, it should never be practiced, except for the extraction of foreign bodies, as balls, splinters of bone, and
other extraneous substance, or for facilitating the application of
ligature to bleeding vessels, for such
dilatation generally increases the
inflammation, which is so much to
be apprehended, and experience teaches
that wounds, which are not dilated,
commonly heal more speedily than
others which are.
The extraction of foreign bodies ranks
as one of the most urgent motives
for the dilatation of the wound,
and no doubt it is right to remove
at first as many of them as possible.
Their lodgement irritates the wound,
causes violent nervous and inflammatory
symptoms, and copious purpurative
circumstances which the timely
extraction of them may prevent.
But it must be remembered, that
the extraction of foreign bodies, is
frequently attended with immense
irritation, and that while they
lie so firmly fixed in the parts, it is often a matter of impossibility. After suppuration has been established, the extraneous substances, become loose, spontaneously approach the surface, and easily admit of removal. Hence it is prudent generally to extract only such foreign substances as are near the surface of the opening, quite loose, and removable without much irritation, or such as press parts of importance and thereby excite dangerous symptoms. Those which are more deeply and firmly lodged, the surgeon should await suppuration, and the detachment of the sloughs, and when the foreign bodies become movable and apparent, remove them, with or without an incision as circumstances may demand.

The examination of a wound, ought to be made, as much as possible
with the finger, which irritates less, and feels more distinctly than a probe.

The issue of the treatment above given is various. Extrinsic substance remaining in the wound either loosen gradually, or come into view to be removed, or they remain concealed, prevent cure, and give rise to a fistulous ulcer, in some instances the wound closes, and the foreign substance remains in the limb during life, without inconvenience, in other cases after a time, they bring on a renewal of inflammation and purpura, sometimes it varies its situation, pointing down, and bringing on the same symptoms in a different part. When a ball lies immediately under the skin, or near it, cut down upon and extract it; but when it is
Three or four inches from the surface and cannot be distinctly felt, no incision should be made, with a view of extracting it. Sometimes the ball penetrates the spongy part of a bone, and lodges firmly in it, as a general rule it should not be allowed to remain there. It should be removed by an elevator, screw bullet dancer, or the Trepigne, if allowed to remain it may cause caries of the bone, disease of the joint, amputation, or death. In the shaft of a long bone necrosis generally follows.

As soon as the requisite incision is made, and foreign bodies extracted, the prime objects in the treatment of Gun Shot wounds are accomplished, and the remaining treatment differs little from the surgery of other wounds.
wounds, when it is evident the shot has passed out, and no
particular object can be fulfilled with the probe, it is better to
dispense with such examination, at least till suppuration has come on.
Introducing any instrument is generally productive, both of pain
and irritation, but when the ball
or other extraneous substance has
lodged in the wound, and its
situation is not immediately evident,
it will often be advisable to search
for it at once, in order if its
situation allows, it may be extracted
before inflammation begins.—
The surgeon therefore after consider-
ing all the circumstances which can
assist him in forming a reasonable
conjecture of the course of the wound,
must give to the probe that
curvature, which he thinks will
reach the ball, and proceed to an
examination, but when this is painful, and the course of the ball obscure it must be abandoned and suppuration waited for. When the wounds are much inflamed, the tenderness and swelling of the parts are peculiarly strong reasons against painful provings. The crumbling of gun shot wounds with lint is particularly hurtful, and the only grounds which would justify it, is placing it there to prevent the congealing of ethereal bodies, moreover, the first dressings should be quite superficial, and of a mild and soothing nature—in most cases a simple pledget of lint, and covering the part with linen bandages, wet with cold water. In regard to the application of cold dressings to the wound, in a large proportion of cases, they are beneficial for the first three
or four days. It is not however an infallible, or always advantageous application. There are many persons with whom they do not agree, and more with whom they disagree after a certain period. It does no good in any stage of inflammation when the sensation arising from the first application of it is not agreeable to the patient's feelings if it produces a sensation of shivering, or an uncomfortable feeling of any kind, with stiffness of the part, it is doing harm, and a change to the agreeable sensation of warmth will prove both advantageous and agreeable. This occurs in general about the period when suppuration has taken place, and cold in such cases is preventing the full effect of the action, which warmth encourages. Fomentations are therefore proper, and practices
of Bread, Carrots, Linsed meal, and other nutritious substances, will be found convenient. In all cases where a poultice is resorted to, as much attention is to be paid to the period of removing, as of applying it. It is need to alleviate pain, stiffness, swelling, the uneasiness arising from cold, and to encourage the commencing or interrupted action of the vessels towards the formation of matter, as soon as the effect intended has been gained. The poultices should be abandoned and recourse had to simple dressings again—Cold applications ought not to be applied, when the torpor, low temperature, and languid circulation in the limb indicate a pick of Gangrene. Hence when a principal artery is tied, their employment is always wrong and hazardous. Rolleis ought not to be applied to recent Gun Shot wounds, for
they soon become stiff and bloody, are cut, and seldom preserved after the first dressing, so as to become useful when their application is required. Sutures should not be used with a view to prevent the closure of the wound, as it is little inclined to close prematurely, and they act as a foreign substance.

Gun shot wounds in general demand the employment of antiphlogistic means, just as other cases attended with equal inflammation. Blood letting is seldom required, for if the patient is reduced below a certain degree his strength is inadequate to support the large and long continued suppuration, which often cannot be avoided. In every case where there is reason to apprehend hemorrhage from some of the large vessels, the patient should be carefully watched, and everything
Provided for its immediate stoverage, there is another kind of hemorrhage which is still more dangerous than the former, occurring particularly in such Gun shot wounds as have long been in a state of ceasing suppuration, the blood does not issue from one, individual vessel but from the whole surface of the wound as from a sponge, and is so thin as to resemble blood and water, it is exceedingly dangerous for it is apt to exhaust the patient who is already debilitated, and its causes are difficult of removal. The case demands the administration of Barks and diluted Sulphuric Acid, the decoction of Barks, with a proportion of Ettamatic acid, being applied to the wound.

Gun shot wounds in crowded and unhealthy rooms, and where little attention is paid to cleanliness l

are often attacked with Gangrene, which requires the treatment applicable to that disease —

The first dressings should not be removed under three or four days from wounds, unless hemmorhage or some other mitigated circumstance renders it necessary, and if the dressings have not been kept moistened, it is recommended to apply a poultice to them a few hours previous to their removal in order to lessen the pain and irritation attending it — or sponging with tepid water will generally answer the same purpose. For a few days the matter seldom assumes a healthy appearance, but as soon as the sloughs separate, it then becomes of a proper quality, and the wound is to be treated as a simple abscess. Sometimes the healing process does not commence
Though suppuration has prevailed a considerable time, and notwithstanding the exhibition of tonics, and a genuine diet, the suppuration ceases to proceed favorably, and the wound becomes unhealthy. The bones show no disposition to unite, and the patient, reduced by hectic symptoms, is rapidly approaching dissolution. In this condition life may sometimes be preserved by Amputation. We ought more to be averse from undertaking the operation by the fever and weakness which frequently soon disappear, when the local cause is removed — Amputation. In this division alone a volume might almost be penned, and I shall merely give some of the outlines, as laid down by various authors, in regard to the immediate or consecutive employment of the knife — Immediate Amputation according to the best authorities, may
be demanded in any of the following conditions—1st. A limb carried away by a cannon ball, or an explosion, requires the operation without delay, in order to procure the patient an even and smooth incision—2nd. When a body propelled by gunpowder, strikes the limb in such a manner, as to smash the bone, violently contuse, lacerate, and tear away the soft parts—3rd. If a similar body carries away the soft parts, and the principal vessels of the limb, without fracturing the bone—4th. If a shot strikes the thick part of a member breaks the bone, divides and tears the muscles, and destroys the large nerves, without tearing however the main artery—5th. If a spent cannon shot or one reflected, strikes a member obliquely lacerating the muscles, bones, tendons,
The articular heads are much broken, especially those which form the joints of the foot, or knee, and the ligaments which strengthen the joints are broken and lacerated. So the above have been added in former years. Compound fractures of the thigh, from Gun shot wounds, which have been considered in a large majority of cases fatal, but the inventive genius of some of our most brilliant minds, has in some measure at the present day, alleviated the sufferings and lessened the ratio of mortality attending such injuries, and they are now treated in many instances successfully, by the application of the Anterior Wire Splint, invented and as I have been advantageously used, by our Professor of Surgery, A. R. Smith, M.D. I believe it to be not only useful in Gun shot wounds of the thigh, but in fractures.
resulting from other causes, and
I shall on all occasions (if the
necessity arises) apply it myself
and earnestly urge all Surgeons
of whatsover nation, to introduce
and apply it, in this treatment
of fractures. from whatever cause
they may arise—

Consecutive Amputation) must
be performed. 1st In spreading
Infection after nature has limited
the disease. 2nd Bad state of the
Discharge. It often happens notwith-
tstanding the most skilful treatment
the Discharge becomes of a bad quality,
and the patient is attacked with hectic
fever, and a colligative Diarrhoea—
3rd Bad state of the stump, the
Integuments at first retracting, and
then becoming diseased a good way up,
the wound changes into a fungous
ulcer, the cicatrisation of which is hindered
by the deep disorder of the bone &
An Inaugural Dissertation on Syphoid Fever Respectfully Submitted to the Examination of the Provost Regents and Faculty of Physic of the University of Maryland for the Degree of Doctor of Medicine by Albert Bancroft of Ind. 1864.
The student, meeting with so many interesting forms of Pathology, whilst perusing his text books and attending the collegiate sessions, finds great difficulty in the selection of one, from the long list, as the subject of an inaugural thesis. Each branch of the profession has a certain claim upon his attention, and with each and every disease he is supposed to be, to a certain extent theoretically familiar; yet he can publish no original thoughts; he can but collect food for his discourse from the writings of others; previously he has only trodden in the path of theory, receiving certain assertions as they have been delivered to him, and laying them aside for future reference and use; he has had no opportunity for testing the truth or falsity of those oftentimes contradictory
doctrines, his practice alone can instruct him which to receive and which to reject: hence his success will depend not alone upon his present knowledge but his future study at the bedside of his patient. If he allows old dogmatic theories to bind him, not accepting new truths discovered by others or forced upon his notice by his own experience, he will at the termination of his professional career be no further advanced than when he first departed from his alma mater.

In these pages I have compiled from the best known sources, the material which I now offer for your consideration, under the title of an Inaugural Dissertation on Hyphrid Fever.
I was advised by an old Physician to choose for my thesis the subject with which I was least acquainted, appreciating the spirit of this advice I have selected a disease which has more than any other been a stumbling block to the young student, and has earned among experienced practitioners the title "aphrodisia indicaeum". Although the history of the malady can be traced back to the first writers on medicine, yet it is only within the last fifty years that it has received a distinct title and its peculiar symptoms, course, and anatomical lesions have been pointed out to the profession. Its appropriate name is still a disputed point and as it can be of no profit to detail numerous conjectures I will proceed at once to the more important subject of its Symptoms.
The accession of the disease may be so gradual, that the patient cannot tell the day he first
commenced to feel unwell; he may notice a
feeling of lassitude and weariness with gradual
fuzziness and dulness, flushes of heat, headache,
coated tongue, anorexia, increased frequency of pulse
and tendency to diarrhoea; these disorders lasting
a week before the characteristic symptoms of the
disease appear. In a few cases the disease may
commence suddenly with headache delirium
and entire prostration of strength. As
the disease progresses the symptoms are increased
in intensity; the patient lies on his back,
in a semi-stupor condition; he complains of
pain in the back, limbs and jugular vein, is
restless and uneasy troubled with epistaxis
Tympanites vomiting, hemorrhage from bowels
and disorder of primary organs. Delirium usually commences about the eighth day and the peculiar eruption may be looked for at the same time. The crisis is generally marked about the twentieth day. The disease terminates in death or the patient commences to improve gradually the first amendment noticed being slight return of strength and appetite. I will now take up the more important symptoms, in the order of their appearance, tracing each one throughout its changes and modifications to the close of the disease. The tongue first becomes coated with a thick white fur. But as the disease progresses it may become either moist and clammy or dry and red and fissured. If it presents a red shining appearance; clearing off at the top and sides in dry flakes, we know that the
bowels are ulcerated and should be treated accordingly. As long as the tongue remains moist, the prognosis is favorable and a dry, thick, with an accumulation of sores on teeth and gums, red or fissured tongue, denotes great danger. The skin is generally hot and dry communicating a pungent sensation to the hands; if collapse takes place it will become cool and moist; at its vitality is much reduced, great care should be taken to protect the patient from bed sores. The pulse varies in frequency throughout the disease, seldom rising above one hundred beats per minute except in females and children. A rapid or intermittent pulse is an unfavorable sign. The diastolic condition of pulse is mentioned by some writers and as it portends hemorrhage should warn the medical attendant of the coming danger.
The muscular tissue is always very irritable and when irritated rises up in a hard knot. Shivers and rigors are common during the first week, but they seldom appear at a later stage unless the disease is complicated with peritonitis. It is usual to date the commencement of the disease from the first shrill headache which is one of the first signs of the disease. Generally ceases on the appearance of delirium which succeeds the previous somnolent condition as this delirium may be active and turbulent the patient should be closely watched as he may by his motions assist perforation of bowels or extravasation of fecal matter. The recovery from the delirium is usually sudden and entire, but it may in some few cases give place to permanent insanity.
Diagnosis is mentioned as an important diagnostic symptom. It is most usually noticed during the second week, and may be only a slight hardness of hearing caused by the general affection of the nervous system. It is seldom severe and always disappears on recovery from the disease. Opisthoton being peculiar to this disease assists us in forming a diagnosis. It is seldom very proprae and in some cases is entirely absent. The abdomen furnishes us with several characteristic symptoms which assist us not only in the diagnosis and prognosis but also furnish an important guide to the treatment. The general form of the abdomen is changed: it is spread out laterally and slightly convex anteriorly. percussion over the tracks of the colon.
Shows the presence of gas which may by pressure be forced from part to part, causing gurgling which is much dwelt upon as a diagnostic sign. Pressure over the iliac-rectal valve causes pain and even when the patient is in a semi-comatose condition the countenance will indicate his suffering. Diarrhea may commence with the disease or continue after the action of a purgative; the discharges are yellow and watery, with a peculiar odour, and numbering from two to six in the twenty-four hours. If an artery is perforated by the elevation blood will be passed with the feces; hence they should be frequently examined by the medical attendant and the hemorrhage checked as possible. In a few cases the bowels remain restless throughout the disease
The rose spots are usually noticed about the eighth day generally appearing upon the abdomen though sometimes on the back, neck, and extremities. They usually number from twenty to thirty, are small and circular slightly raised above the surrounding skin disappearing on pressure and returning when the pressure is removed. They continue to break out during second week the old ones fading as new ones appear. They disappear during the third week and do not return unless the patient has a relapse. They are caused by an extravasation of blood under the cuticle.

The mucous membrane of the air passages is also found affected, becoming dry and inflamed and causing dry cough.
This symptom is of no danger except in very prolonged cases, where the inflammation may extend into the small air tubes, causing death by pneumonia or may fill the bronchial tubes with a tenacious secretion which the patient is unable to expel. Perforation of the bowels either into the peritoneal sac or through one of the pancreatic arteries is a common result in this disease. In either case the danger is great but the patient may recover under proper treatment. Great care should be taken that the bowels are moved about as little as possible either by the motions of the patient or the manipulation of the Physician. Other occasional disorders consequent.
upon the disease. May appear, as, jaundice, stomach, headache, and urinary disorders. But as these are common in all low fevers, they need no particular description here. The duration of the disease may be estimated at twenty to thirty days, though it may be prolonged to the sixtieth day, and then terminate fatally. Death seldom takes place before the fourteenth day, and recovery rarely commences before the third week.

In speaking of each symptom I have also mentioned its value as a diagnostic and prognostic sign, hence I shall have little to add under these two heads. During the first week it is difficult to recognize the disease, but when the characteristic symptoms
appear as epistaxis, petechial spots, pain in the right iliac region, watery diarrhoea, hemorrhage from the bowels and entire prostration of strength. They at once point out the true nature of the complaint. The only disease with which the well informed physician is liable to confound it is a low form of remittent which often takes upon itself a low typhoid character but can never change to true typhoid. The prognosis must be in all cases doubtful at any case no matter how slight the symptoms may appear it is liable to terminate fatally either by the regular course of the disease or through indiscretion in diet or exercise. Certain symptoms may assist us in finding out the present condition of the patient and thus aid us in foretelling its result.
All signs of muscular strength, a strong voice, free inspiration and slight elevations are looked upon as favorable; while entire muscular prostration, loss of voice, cough, coma or violent convulsions are accounted unfavorable. Petechiae, cold sweats and weak intermittent pulse show approaching dissolution.

The Anatomical lesions may be divided into the characteristic and occasional. The great and peculiar lesion, found in this disease and in no others, is inflammation and ulceration of the glands of Beyer. to which the attention of the profession was first by Jenner and Spurz. These glands situated in the eulcnum most numerous near the vocal valve, have attracted the attention of many anatomists.
who have, as yet, been unable to discover their peculiar offices and use. One theory is that they are absorbers, occupying the same position in the lower part of the ileum that the lacteals do in the jejunum, the other most common theory is that they are separating organs assisting in purifying the blood from any extraneous or noxious material and casting it into the great waste gate of the system, the "primai vasa."

Both are ingenious explanations but so opposite in character that we are lead to doubt the correctness of either. These glands are always found inflamed and most frequently ulcerated. They may soften and give way causing perforation into the peritoneal sac or one of the mesenteric arteries.
This lesion is most frequently seen at an advanced stage of the disease and seldom occurs in children. Inflammation of the mesenteric ganglia most frequently of these corresponding with the diseased glands of Peyer, is another lesion peculiar to this disease. If it could be discovered whether the mesenteric ganglia or the glands of Peyer are first affected it might assist us in pointing out the effects of those glands and by that means the cause of their inflammation.

The occasional lesions are, inflammation of mucous membrane of pharynx and air passages; alteration of the solitary glands (incorrectly called the glands of Brunner) and inflammation of the spleen liver and kidneys. The brain heart lungs and other vital organs.
are usually found inflamed and in lingering cases softened.

The terminations of the disease are death or total or partial recovery. In the serious diatheses the germs of that disease previously dormant may be excited into action and the patient though recovering from the exciting cause is liable to some of the numerous complaints incident to scarfiga such as Phthisis, Acne Ophthalmica and weak joints. Deafness occurring during the disease may continue through life and as I mentioned before the delirium has in some few cases given place to permanent insanity.

The Causes are but little known. It confines itself to no particular social
class age sex or colour; it enters the palace
and the hovel, the mansion of the master
and the cabin of the slave. It strikes down
the patriarch and the infant; man in his
strength and woman in her beauty. Yet
all are not equally liable to its attacks.

Certain lines of distinction may be drawn
demarcation
beyond
those which the disease seldom passes. The
very old and very young are, as a general rule,
 exempt from the disease that is it is most
frequent between the age of fifteen and thirty.
It is most frequent in the ill ventilated
dwellings of the poor, who debilitated by
exposure want of proper food and vitiated
atmosphere are peculiarly liable to this
or some other low form of fever. Like
the typhoid fevers it protects the
patient against a second attack.
As the propagation of the disease by contagion is still a matter of dispute among medical savans, it will not become me, at the present time, to hazard an opinion. But until the disease shall have been proved, by the most positive testimony, to be entirely destitute of contagious properties, we should act on the principle that it is contagious, and exert our utmost skill to prevent its generation and I consider that a thorough knowledge of the different methods of preventing disease belongs to the science of medicine equally with the remedies for its cure or alleviation.
Treatment. Watson says that the treatment of Typhoid fever has always been a stumbling block to the young practitioner, and as the forms of treatment recommended by different authors are so opposite in many important points,center upon the consideration of this part of my subject with doubting footsteps, hoping that the faults of omission and commission will not be criticised too severely.

No regular routine form of treatment can be marked out; different climates, seasons, and epidemics require entirely different remedies; and as the disease has changed so remarkably in its essential nature, during the past few years, I shall follow in my short sketch of the treatment the more modern American writers.
The treatment resolves itself naturally under two heads, General and Local or General and Symptomatical. The first extended to the system at large, the second to the various local symptoms as they appear. Bleeding, Cathartics, Alteratives, Diaphoretics and Diuretics belong to the first class and I will now proceed to speak of each in the order of their mention. In former years general bleeding was considered an important and necessary preparative to other remedies but people and practice have both changed and at the present time hemorrhage is never practised on this disease except to prevent threatened congestion of the brain or other vital organ. Cups and leeches may be useful to believe
any local congestion or inflammation, but their effect on the general system should be closely watched. A mild aperient should be given at the commencement of the attack, especially if the bowels are passive, but the young physician must remember that the tendency of the disease is to diuresis, and that therefore cathartics must be used with great caution. The Castor oil mixture is an eligible formula. A small dose of magnesium may be given; either one will generally act freely and a repetition of the dose is seldom required. During the first stage of the disease especially if the symptoms are indistinctly marked, Diaphoretics and diuretics will be found useful and agreeable to the patient.
The neutral mixture of vinegar, saltn. solution and sol. of lemon juice are all valuable remedies at this period. Cold fomentation is also a useful auxiliary of the diaphoretics mentioned by subduing the fever and rendering the patient more comfortable, but if not pleasing to the patient himself they should be at once discontinued. The use of mercury is still a mooted point but the salutary changes I have myself seen follow its administration (while attending my ward in the infirmary) have lead me to conclude that if properly given and its poisonous effects guarded against it is a powerful and valuable instrument in promoting the secretions both of the skin and mucous membrane. The indications for its use are hot dry skin
Dry tongue scanty urine with pain in the abdomen and delirium. The formula recommended by our late Professor of Practice was R. Mass. Hydrarg. gr. viij. Cortex Popp. viij. Pulv. Digitalis ad opii gr. viij. Pulv. Belladonnae gr. viij. To be given as viij. one every four hours until the gums are touched or the symptoms relieved. I have omitted to mention the use of emetics which are often useful during the first three days of the disease by unloading the stomach of its indigestible food and preparing the way for other remedies. Opium may be used in cases of restlessness with loss of sleep but they should be given with great caution and their effects closely watched as the stupor and coma they produce may be charged to the disease rather than to the remedy.
As local symptoms arise they must be met by their appropriate remedies. For profuse diarrhoea use vegetable astringents and opium. For hemorrhage from the bowels give acetate of lead combined with kino or catechu. If the pain in the abdomen is severe apply leeches and follow with a large thin poultice; leeches may be needed to relieve headache and when the delirium is violent and prolonged the head must be shaved and cold water or ice applied to the scalp. When the symptoms indicate inflammation of the brain use blisters to the scalp and the usual remedies for Encephalitis.

When the tongue assumes that peculiar condition (mentioned under Symptoms)
which denotes inflammation and ulceration of the glands of Odyer, we must at once
resort to oil of turpentine, which may be
given in doses of ten drops every two hours
in emulsion. This will often have an
almost magical effect, healing the ulcerated
surface and promoting rapid recovery.
If peritonitis supervene with or without
perforation we must depend on opium
to restrain the peristaltic action of the
bowels; it may be contraindicated by other
symptoms but as it is the only remedy
which offers the least chance of safety
it should be used freely; in some few
cases bowels may be applied with ad-
vantage. In cases of extreme prostration and
collapse we must resort to stimulants as
wine, tea, brandy or carbonate of ammonia, or Quinine may be used in small
doses frequently repeated, as a grain every hour.
The urine may be and in severe cases is always
retained requiring the use of the catheter; this
should be particularly remembered as the patient
is entirely unconscious of his condition and
the attendants may consider the dribbling
caused by the distended bladder as a free
discharge. As the disease is long-continued and
the vitality of the skin much reduced the
patient should be protected from bed sores
by rubbing exposed parts with stimulating
lotions or applying adhesive plasters.
During convalescence the patient must be
closely watched as the slightest exposure to
the influences of the weather or indiscretion
in diet may bring back the disease. His food should be of the mildest and least stimulating kind, gradually increasing in strength and quantity until perfect recovery, and no patient can be considered well until the tongue is clean and healthy, the bowels regular and the abdomen free from pain.