

AND

INAUGURAL DISSERTATION,

ON

Typhoid Fever



PRESIDENT, BOARD OF TRUSTEES, AND MEDICAL FACULTY



University of Nashville,

FOR THE DEGREE OF

DOCTOR OF MEDICINE.

BY

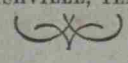
John D. Bennett, Jr.

OF

Tennessee



CHARLES W. SMITH,
BOOKSELLER AND STATIONER,
NASHVILLE, TENN.



Dedicated
To

Wm R Bowling, M.D.
Professor of Theory & Practice
in the Medical Department
of the University of Nashville
By the
Author

Typhoid Fever

This is an essential or Idiopathic fever presenting I suppose far greater diversity of symptoms than are presented by any one other disease to which humanity are subject and depending if upon any special cause upon one yet undiscovered by the medical Profession it is said to belong to the human family and to appear in every part of the globe

With all its diversity of symptoms there are always leading and diagnostic symptoms sufficient to give us a recognition of it where it really exist It usually makes its approach very insidiously. The patient is neither sick nor well as he will express it but thinks he needs a little medicine he feels uncomfortable tired and sore

in his limbs and complains of dull headache the skin is hotter than natural the face flushed and the pulse accelerated the tongue is slightly coated.

His appetite though not extinguished is much impaired and thus he may continue for a week or more before he feels himself sick enough to take his bed during this period he will have chilly sensations alternated with febrile excitement not at regular periods as in intermittent fever but perhaps several times in the day.

When the disease is fully formed the chillings cease entirely during this forming stage there is either diarrhoea or great susceptibility to the action of cathartic medicine so much so that quite a small dose of cathartic may produce considerable purgation.

The disease sometimes though very rarely continues its usual period (is three or four weeks) in this mild form until recovery takes place, but more commonly and indeed almost always the symptoms now grow worse. There are the general phenomena of fever such as frequency of pulse heat and dryness of skin flushed face pain in the head sometimes in the front and sometimes in the back of the head loss of appetite thirst and great general weakness.

There are also pain in the limbs and back and sometimes a feeling of soreness throughout the whole body in some cases there is much restlessness with want of sleep and in others there is a disposition to sleep all the time. The pulse in this disease varies very much in different cases in some it is slow full and laboring in others

it is frequent small and weak amounting
 often to 120 and more beats in the minute
 There is not unfrequently a dusky hue of the
 complexion with a certain heaviness or dullness
 of expression which is in some cases very
 striking, hemorrhage from the nose is not
 an infrequent symptom and in many in-
 stances quite a characteristic. It is generally
 slight but sometimes considerable and
 of vast benefit to the patient in relieving
 the distressing headache. In some cases the fever
 has a tendency to remit daily or even twice a
 day and the exacerbation subsides with
 slight perspiration though quinine at this time
 does not seem to be of advantage in prevent-
 ing return of fever but rather excites it. These
 symptoms continue with little or no change
 for several days unless a gradual in-
 crease the pulse becomes weaker and more

frequent the skin acquires greater heat and dryness the tongue begins to ruddle at its tip and ~~edges~~ and show a tendency to dryness. The abdomen is found to be tympanitic and painful under pressure exhibits a gurgling sound particularly in the right iliac region and diarrhea is frequently present. Cough with mucous expectoration frequently sets in and a roughness in the breathing or mucous rale is detected by auscultation. The urine is generally high colored and offensive and sometimes scanty. The disease generally exhibits these symptoms until eight or ten days from the time of its complete formation when the tongue becomes very dry and assumes a brownish color particularly during sleep. The pharynx may participate in the dryness causing difficulty in deglutition the lips become very dry

and sore and sores collect about the teeth
 The tongue may be cracked and gashed and is
 with difficulty protruded from the mouth
 the nervous symptoms which were heretofore
 slight now become more decided. There is
 considerable subsultus tendinum delirium
 often ditto in at this time and the patient
 is troubled with deafness. The abdomen
 is much distended rose colored spots
 like flea bites may be ~~found~~ if they are
 little reddish spots that disappear under
 pressure and return upon its removal
 They are sometimes very fine so much so
 as scarcely to be discoverable. These spots
 are considered by Dr Wood to be the most char-
 acteristic symptoms of Typhoid Fever close
 inspection will discover sudamina small
 vesicles upon the neck and chest and some
 times over the whole body.

The symptoms may here remain stationary for a week or more and recovery take place and I am glad that I can say from the cases I have seen with my Preceptor that I believe that a vast majority of the cases do stop at or before this point and recover. However should the disease not stop here a complete Typhoid state is developed the symptoms seems overpowerd and ready to yield to its more powerful foe. The tongue is encrusted with a coat of thicker brown or black and often draws up to not more than half its natural size or is gashed and sore giving it a thick hard dry appearance dark borders are upon the teeth gums and lips. The surface of the body is generally cold and clammy though sometimes hot and emitting an unpleasant odor; indeed this odor can generally be detected very soon after the full formation of the disease. The subcutaneous

8

is increased sometimes so much that the hands and arms are in constant motion and general spasms even muscles there appeared. The patient picks the cover or the air and mutters to himself and sometimes he will rise from his bed and walk out or go in an adjoining room under the delusion that some one is calling him. He lies upon his back and often slips involuntarily down in the bed petechia purplish spots appear upon the skin but sores form upon the hips and sacrum he may have involuntary discharges; or retention of urine or hemorrhages as from the bowels or nostrils finally if the case is to terminate fatally the pulse becomes either excessively frequent or slow and scarcely perceptible the extremities are cool and during the course sometimes occurs. countenance assumes

The Hippocratic aspect and life is quietly
 and almost insensibly resigned.
 When a favorable termination is to take
 place the tongue becomes moist and clean
 gradually from the edge and tip the pulse becomes
 less frequent and acquires greater fullness.
 The stupor and delirium subsides the patient
 begins to notice things around him and
 manifest some anxiety about himself.
 The tympany diminishes and the appetite
 returns. The tongue sometimes instead of
 cleaning gradually from the edges through
 off its fur in flecks leaving a red smooth
 and shining surface. This does not indicate
 a convalescence unless the tongue becomes
 moist and then the convalescence is apt
 to be tedious. If the tongue remains dry it
 is apt to coat over again and again become
 clean and this change may take place

several times. If however after the tongue has cleared and again becomes permanently dry the patient is again in imminent danger and this is the condition which induced Dr Wood to try the oil of turpentine which has since gained great celebrity in the treatment of this affection death may and does occur in this disease from perforation of the bowel the patient dying in a short time with symptoms of acute Peritonitis. This may happen in the midst of convalescence and more frequently in mild than in aggravated cases fortunately however this is a rare occurrence

This disease has no exact time in which to run its course it usually lasts from three to six weeks though some cases terminate sooner and others even later than this time the symptoms most usually met

with and most important in making a diagnosis in this disease are diarrhoea which is an almost uniform symptom: it sometimes even precedes the fever but most generally comes on ⁱⁿ a day or two or follows the first exhibition of a cathartic. The stools are generally of a yellowish or brownish color and of a healthy appearance except in consistence; Tympanitis is almost always present running on generally several days after the formation of the complaint the colon is generally the seat of this morbid collection of gas, head ache is almost always present in the commencement of the complaint. It generally occupies the forehead and eyes though sometimes is seated in the back part of the head and is dull and heavy rather than acute. Hemorrhage from the nostrils

is not an infrequent symptom twitching of the tendons at the wrist in greater or less degree is apt to be observed. Frequent pulse cough bronchial rales dry tongue with red tip and edge dull expression and actual dullness of mind hardness of hearing and delirium are symptoms some of which are always present and not infrequently all upon examination of the body the rose colored spots and sudamina may generally be discovered

There are grades or variations in this disease from the very mildest form in which there is but little disturbance of the system to that of the most fatal and alarming imaginable in which the brain seems especially involved. Delirium and stupor soon sets in and the patient will be for several days muttering delirious

delirious sentences it being sometimes impos-
 ible to arouse him to consciousness when
 general prostration takes place black
 borders collect about the mouth and
 death ensues frequently at the end of
 a week. It seems that the lungs are
 quite liable to take on inflammation in
 this disease super adding a Pneumonia
 there to which renders it much more
 dangerous and difficult to manage as
 regards the anatomical characters of
 this disease. It seems that there is a nec-
 essary and universal change in but
 one organ in the body and is in the
 Spleen in the Glands of Peyer These glands
 are always found to be in a state of
 inflammation and ulceration so much
 so that this condition in them is as
 characteristic of Typhoid Fever as the

peculiar pustular eruption is of small pox is characteristic of that disease.

The circumstances under which this disease is produced are so diversified that nothing precisely is known of its cause sufficient for me to say that I believe any exposure to heat; cold or dampness; fatigue bad living breathing the air of badly ventilated houses or any other circumstances that will derange the functions of the different organs of the body may produce it. It will occur at any season of the year and is now the endemic fever of this country but I believe that it is more fatal in winter than in summer it seldom occurs twice in the same individual though it may be so; for a case in a patient came under my observation

in 1856 a negro man at Franklin. Tenn
 was attacked in the spring with this disease
 and recovered after a very serious and
 protracted illness he was attended by
 my Preceptor and I saw him frequent-
 ly; in december he was again attacked
 and my preceptor attended him again
 and during Christmas he invited me
 to see him and called my attention to
 the circumstance of its being the second
 attack and observed that it was very
 rare. It is thought by many Physicians
 and all the people to be contagious I think
 as it ordinarily occurs it cannot
 be imparted from one individual
 to another but in an epidemic of the
 disease where several are confined
 in the same room without proper
 ventilation it probably may be commu-
 nicated

Very young children and very old persons fortunately enjoy an immunity from this terrible disease

^{of} Treatment. - From the little I have read and seen and the much I have heard concerning this terrible disease it seems to me that there are few serious diseases which exhibit more happily the influence of judicious treatment. The Practitioner should never be discouraged no matter how unmanageable the symptoms but persevere to the end for the most alarming and apparently desperate cases may recover; neither should he be careless and negligent no matter how mild the symptoms for the mildest cases may prove fatal. The Prognosis should therefore always be cautious. On account of a great susceptibility to the influence of cathartic medicine caution should be used in its exhibition.

In the commencement some mild cathartic sufficient to thoroughly evacuate the bowels should be administered.

Two teaspoonfuls of castor oil or a small dose of Epsom Salts will generally answer the purpose should there be Diarrhoea with pain the addition of 20 or 25 drops of Laudanum to the castor oil will be serviceable. Afterwards through out the complaint the state of the bowels should be attended to. So as to control the diarrhoea or if on the contrary the bowels are bound to procure at least one discharge daily.

To procure this the mildest laxatives will suffice a fluid drachm or two of castor oil a drachm or two of Epsom Salts or ten or fifteen grains of Rhubarb may be given for a dose and repeated if necessary; after the disease has continued for some time and the patient very

much reduced thereby it is best to keep the
 bowels open by enemata and I know none
 better or more convenient than warm salt
 and water. The headache in the commencing
 stage generally requires attention and is
 in many cases promptly relieved by an
 emetic however should this fail or be
 contraindicated cupping upon the
 temples or back of the neck rarely fails to
 give relief. General bleeding might be re-
 sorted to if indicated by active congestion
 or inflammation. After the headache has
 been relieved or the means calculated to
 relieve it has been employed and the
 bowels have been thoroughly evacuated
 it is recommended that the patient be
 put upon refrigerant Diaphoretics as
 the Effervescent draught and the neutral
 Mixture; now these may sometimes be of

Service but from the observation of most Practitioners I have conversed with upon this subject and from the little experience I have in this disease from personal observation I believe they frequently irritate the stomach and worry the patient and in this way oftentimes do more harm than good should the skin be hot and dry sponging with cold water and cloths wet with cold ice water applied to the head gives more relief than any other remedy. It not only relieves the burning heat of the surface but it reduces the pulse and appeases or mitigate the excessive thirst and causes rest. To relieve the irritable stomach so common in this complaint and the burning thirst ice is far superior to any other remedy and instead of causing the bowels to become too loose it frequently checks the

Diarrhoea. The patient may vomit a green or blue liquid from the stomach in which case; the lime water in Table 2 spoonful doses mixed with an equal quantity of cold sweet milk or ice water given every two or three hours generally gives relief very soon Restlessness and wakefulness at night should be quieted with the extract of *Nog oscianus* given in five or six graine doses every hour until three or four doses are given or rest is obtained.

Some Physicians rely principally upon mercurials in this disease. I believe this practice applied indiscriminately to be a very hazardous one and fraught with much danger to many patients. I cannot see the indications for the vigorous use of the medicine in Typhoid Fever as it occurs in this country; and in fact the opinion of the

ablest Practitioners in this country who
 see it and treat it and test the power of
 medicine upon it is against this vigorous
 use of mercury when the tongue becomes
 red and dry and the Tympanitis is consid-
 erable mercury is of no avail and should
 therefore be withheld but when the tongue
 has little or none of these redness and
 dryness so common in Typhoid Fever
 Mercury in the form of Hydraginum cum
 creta given in doses of from three to five gra-
 ins three or four times a day for four or
 five days in succession is thought to
 have the happy effect by its alterative
 influence of shortening the disease and
 mitigating its symptoms. But the rem-
 edy universally in use and the one
 in which the profession has to great
 est confidence in the treatment of

This disease is the oil of Turpentine. It is to
 be given at all times and stages of the disease
 when the tongue is red or dry without per-
 ticulus regard to any other symptoms;
 should it irritate the stomach or purge it
 may be combined with an anodyne such
 as Sassafras or one of the salts of Morphia
^{or} There is a condition not uncommon in
 this affection in which Dr Wood considers
 the Turpentine eminently the remedy, it is
 in the latter part of the disease when con-
 valescence seems to have set in when the tongue
 having rapidly cleared by throwing off its
 fur in flakes again becomes dry and red
 thus evincing a serious increase in the
 intestinal disease. The remedy should
 be administered in emulsion in such
 dose that from ten to twenty drops shall
 be taken at each time and repeated

every two three or four hours as the urgency of the symptoms may require. An emulsion made of eight ounces of water two drachms of gum arabic and two fluid drachms of Turpentine of which a table spoonful may be given at a dose will answer the purpose this remedy acts in some measure as a stimulant but chiefly as an attritive upon the inflamed and ulcerated surfaces of the intestinal mucous membrane

Stimulants and nourishment are all important in this disease and should be administered as early as the symptoms will admit for in consequence of the lingering and exhausting nature of the complaint the system without timely assistance from stimulation and nourishment will sink below the point

at which any artificial means can be of service. The practitioner should therefore be always on the alert; and whenever the surface loses its heat and becomes cool and the pulse loses its hardness and fullness and slower than natural or faster and more feeble. Administer wine whey brandy or port wine as seems best to answer the indications of the case.

Diarrhoea is generally the most troublesome symptom in a case of Typhoid Fever ^{and} ~~and~~ in some instances completely unmanageable but generally speaking opiates and astringents will control it. The subnitrate of Bismuth in large doses ten or twenty grains combined with chalk with or without the addition of opium every four or six hours often acts like a charm in relieving this symptom. The Bismuth with opium and nitrate of silver is strongly

recommended in the diarrhoea and also in the hemorrhage from the bowels which is not uncommon in this affection. In as much as it appears to me that there is great reason for preserving the stomach in as healthy a state as possible in this disease; I would dissent from using ~~opium~~ ordinary medicines containing it by the stomach; and endeavor to check the diarrhoea by injections of acetate of lead and of morphia five or six grains lead and a half a grain or more of morphia in three or four ounces of cold water.

A strong decoction of the bark of the Tanners oak with laudanum used by injection will sometimes answer the purpose when all others have failed mustard plasters should be applied to the bowels; and warm fomentations of cinch or wheat bran and hops should be kept constantly applied

My Preceptor Dr P. N. Cook of Franklin Tenn is in the habit of using alum for the diarrhoea in this disease when the usual means such as opium or morphia and acetate of lead chalk Bismuth and opiate and astringent injections have failed. He has used it in doses of four or five grains every two three or four hours according to urgency of the symptoms and has never known it to fail to check the most obstinate diarrhoea. The stools very soon begin to thicken under its use and in the course of three or four days the diarrhoea ceases altogether.

It is a remedy he prizes very highly and I have myself seen him use it frequently with complete success.

The subsultus Tendinum is often excessive and requires remedies directed especially to its relief & pts of Nitro

Hoffmanns anodyne Hyosciamus and Camphor
 in pills or But this symptom when ex-
 sive denotes great derangement of the cerebro
 spinal centers and is but little amenable
 to remedies but subsides as the disease gets
 better.

Typhoid fever seems to have a circo course
 to run and this course it will run despite
 the Doctor and his medicines; therefore I think
 all vain attempts at cutting it short with
 large doses of quinine or any thing else should
 be withheld and it should be the aim of the
 Physician to combat the symptoms as they
 arise; and rather to guide than force the
 disease; and he should endeavor to do this
 with as little medicine as possible. Great
 attention should be paid to diet. The patient
 should be allowed such diet as he desires
 provided the arteries are not likely to be

inferious. Rice. Tea and Toast or crackers. Muck
and milk and arrow root are the articles
most commonly prescribed. Buttermilk seems
to be a favorite drink with many persons
suffering with this disease.

When the patient is very feeble and much
reduced Beef Tea or essence of Beef should
be prescribed. Having given the treatment
that is recommended to most the symptoms
which are almost always met with in
Typhoid Fever. I will now give the treatment
I would pursue in any ordinary case
of this disease. If in the beginning if I belie-
ved antiseptic advisable I would admin-
ister one of Spicacaulha then a gentle cathar-
tic of Rhubarb or castor oil if the bowels
were not sufficiently open and apply
cold wet cloths to the head if the head
was hot and painful. If the patient

could not rest well at night I would give
 the Hyosicamus at bedtime; the next day should
 the headache be distressing I would take blood
 from the temples or back of the neck by me-
 ans of cups and if the tongue was red on its
 tip and edges or had a tendency to become
 dry I would prescribe the Terpentiu immediately
 every three or four hours during the day
 and let the patient rest at night. I would
 allow him to take cold water or ice in modera-
 tion; should there be tenderness in the abdo-
 men, I would apply mustard once or twice
 a day and keep warm poultices of wheat
 bran on account of its lightness; upon the bowels
 constantly. I would allow him to eat something
 at mat times. As long as the patient remain
 tolerably comfortable without excessive fever
 and with even slight diarrhoea one or two
 loose operations in the twenty four hours

I should ~~continue~~ this plan and expect him to recover in the course of three or four weeks: If about the eighth or tenth day or sooner the symptoms should grow worse as is not uncommon on the tongue becomes dryer the diarrhoea increases and the abdomen becomes more distended with with increased soreness from pressure I would apply a large blister over the abdomen and let it remain six or eight hours or until it drew well and keep it dressed with fomentices I would give the Turpentine every two hours and to every other dose add five or six drops of the oil of Sassafras. I would endeavor to control the diarrhoea with opiates and astringent injections as acetate of lead and acetate of Morphia and the oak bark tea with Laudanum; or starch and Laudanum and this

This case support the Patient upon Port
 wine or Brandy and such mild nutri-
 ment as I could induce him to take I
 believe that a great majority of cases
 will begin to amend upon this treatment
 by the end of the third week but should
 as will sometimes happen the symptoms
 still increase; I can do no more than
 sponge him with cold water if the sur-
 face is very hot and this is said not
 to be frequently the case and support him
 with brandy and tonic doses of quinine
 when the pulse is feeble and the skin cool
 which is more frequently the case; and
 try to controvert the diarrhoea with the usu-
 al means as Bismuth Alum. and employ
 nervous stimulants as Sweets, Spirits of Niter;
 Camphor; Mezosecumus &c. to relieve Subsul-
 tus Tendinum if essential and if there

be much delirium or stupor apply a blister
to the occiput; This sometimes ~~though~~ not
always has a happy effect upon the case
relieving the subsultus and delirium
as soon as it has drawn. These are the un-
fortunate cases and for the most part fatal
though sometimes and I might not unfr-
quently they agreeably disappoint friends
and Doctors and recover—