IN AUGURAL DISSERTATION
ON
LYMPHOID FEVER

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BY
J. BOYD TALBOT

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In selecting Typhoid fever as the subject of this medical thesis, we have been controlled by a desire to render the result of our own observation and researches, as far as possible, to shun the time worn theories and obsolete dogmas of authors to present to the faculty a paper free from extracts and plagiarisms. Our observation of the symptoms, in the various stages of the disease, our researches and examination of its ravages, as presented, both at the bedside and upon autopsy inspection, the adverse views entertained by different physicians, in reference to the etiology, pathology, and treatment of the great mortality attending it, have forced us to the conclusion that it is a form of fever which as yet, not clearly comprehended, nor fully understood by the profession generally.

Having resided for the last five years in a section of country where Typhoid fever was the
principle prevailing disease among the first observations which we made after we commenced the study of medicine, was the obscurity in which this disease seemed to rest; the unsettled condition of the minds of the medical profession in reference to it. Conversation with physicians and upon consulting authors, we found that almost every practitioner who had the independence to think for himself, held his own peculiar views in reference to the disease, I treated it according to those views. Our attention having been thus early called to these facts, we lost no opportunity for studying and investigating this disease either at the bedside or at post-mortem examinations. Before I proceed to give my views in reference to this disease, I will state that we do not consider the obscurity in which it seems to be enveloped as a difficulty inherent in the subject itself, but to a want of research and investigation on the part of the younger leg.
prominent member of the profession &a toady yielding of opinion to what they please to term the authorities. Certainly the practitioners who is so frequently called upon to treat this disease is as constant by moving in its very midst, with numberless opportunities for observing & investigating it, in all its grades phases & stages, should know more about it than the clotted author or authority who has neither opportunity or inclination to give to the subject a thorough investigation & therefore draws upon his ingenuity & content himself with giving to the world vague theory, wholly devoid of practical utility, as authority. The Western physician if qualified to practice his profession at all, is as capable of investigating disease, judging of its course & effects, as are the authorities, to whom, according to custom, all who have not written & published a work on diseases must bow. He has access to every channel of information which the
world afforded, I should not doubt his own powers and capacities so much as to yield unconditionally to the opinions of others were they failing to investigate nature's diseases, which are subjects of the first highest importance to every physician.

**Symptoms**

Slight uneasiness and giddiness about the head, loss of appetite, nausea, pale and shrunken state of the skin, uneasy and dejected countenance, dull heavy stomach, at painful eyes, slight muscular tracings, a general sense of languid and debility with a total indisposition to corporal or mental exertion. After an indefinite period, varying from two or three days to a fortnight, these symptoms give place to those which mark the stage of invasion. (813) Chilly sensations alternating with flushes of heat; a quick, small, irregular pulse. After a few hours the chilly sensations subside, the heat predominates. The febrile symptoms increase...
rapidly. The face becomes flushed, the countenance agaunt, the pulse increases in strength and frequency, the skin is dry. Considerable thirst for cold drinks exists, the tongue is broad and flat, covered with a white fur; the bowels are generally torpid, the head feels uneasy and giddy as if stunned by a blow. The mind is confused, the eyes are red, watering more painful, the patient is restless; complaints of a general sense of weakness and fatigue, the secretions generally, an deficient in quantity, the urine is high colored, fevers an unnatural odor. Within forty six hours after the stage of invasion, the oppression in the chest is much increased. It is now accompanied by a dry hacking cough and or less pain. At this stage of the disease, there is always fullness and tenderness in the right hypochondriac region. Tenderness under pressure. The patient never fails to complain of pain in the head, back
The function of the brain now becomes more and more disturbed, the mind is wandering. The thoughts of the patient are almost always of an unpleasant, disagreeable, corresponding character. He frequently starts up as if frightened, turns vacantly about the room, speaks incoherently; his sleep is short, in tempestuous fitfulness; his dreams are unpleasant, fitful, indistinct, as demonstrated by the countenance. The subjects about which he mutters during his slumber—Delirium rapidly increases. The patient if left to himself talks incoherently, starts up in bed as if alarmed, speaks to those who are absent or dead, calls for his clothes, says he is going home, complains of burns, famish, thirst; treatment from friends until his attention is arrested by some one speaking to him and interrupting his train of thought. When he becomes conscious of this hallucination, he will sometimes utter a few short sentences to it; but once sickness into
the same monotonous state. The patient now manifests a total
aversion to either bodily or mental exertions; he moves
slowly, apparently with great reluctance; if addressed,
his answers are slow, hesitating, and persist in almost
always given in monosyllables. The duration of this
stage of excitement is very variable, uncertain; it
sinking sometimes supervening at any time on the third
fourth day. Again not until the twelfth, or even the
twelfth day. The superintendence of this stage is announ-
ced by the occurrence of great prostration - small, fall
of very frequent pulse, a collection of black blood at
the teeth, a dark, dry, cracked appearance of the
tongue, whilst the edges of the are of a fiery red disposed
to bleed. There is now more or less constant alteration
of a low muttering character, difficulty of hearing, twitch-
ing of the muscles of the face, subcutaneous tendinosis,
constant recumbency on the back, thorough, a tympani-
ous and very tender state of the abdomen under pressure,
a decided tendency to diarrhoea, the discharges
always being watery, acrid and very offensive. This stage usually continues from three to ten days terminating either in death or very slow convalescence. The occurrence of convalescence is announced by an reduction in the frequency of the pulse, a moist tongue, abatement of fever, delirium, intervals of sound and quiet sleep and uniform moisture of the skin.

While thus concisely stated, the symptoms which ordinarily characterize this form of fever, independently of those which are superseded by the occurrence of visceral inflammation, which always supervenes about the second or third day of the stage of excitement of the disease, is not arrested, or its natural course interfered with by remedial agents. The organs most liable to become the seat of inflammation in this disease are the brain, the mucous membrane of the intestinal canal, the lungs, the liver. Their liability to become involved occurs in the order we have mentioned them. Inflammation of,
The brain is indicated by throbbing of the carotids, deep seated pulsating pain in the head, red and dry, a morbid sensibility of the eyes, flushed countenance, irregular respiration, continual watchfulness, constant and almost unceasing delirium.

The eyes soon became clayey and bloodshot, the pupils contracted, there is intolerance of light, a glazed and agitated countenance, expression of great suffering, continued moaning and finally coma.

If the mucous lining of the stomach and bowels become inflamed, the symptoms of fatal enteritis are superadded to those which preceding characterized Typhoid fever. Tenderness and tympany of the abdomen, quick, frequent, very small pulse, constant and urgent desire for cool drinks, restlessness are the back with the legs flexed on the body, anxious and deep expression of the countenance, burning sensation in the stomach; frequent vomiting generally.
early very great prostration of strength. When the lungs are involved the ordinary symptoms of pneumonia are present as great oppression of breathing, obtuse pain in the chest, cough, bloody expectoration, laboured and not unfrequently obstructed irregular pulse and in violent cases tending to effusion desorganization of the lungs, the veins of the neck became turgid. The countenance acquires a livid hue. The occurrence of inflammation of the larynx is announced by pain in the neck hypochondriac, tightening Vanessa in the epigastric left hypochondriac regions, pain in the sternal clavicle of the right side, pain in the chest; a dry troublesome cough; difficulty in breathing, mucus and bilious vomiting frequently occurring, the worse severe these symptoms are the life the patient will be troubled by cough, difficulty of respiration.

The urine is always highly inured with bile. The white of the eyes the skin upon the face, neck, breast, presents a jaundice hue.
Exciting Causes.

Perhaps a greater variety of opinions have never been
expressed by medical men in reference to the cause of
any disease, than the form of fever now under con-

sideration. Whilst some maintain that this dece-
ase is essentially nervous, is produced independent
of morbid agents, others assert with equal con-
dence that it is always dependent upon a peculiar
power or morbid agent which they do not at

tempt to explain farther than to say that it is

an enemy. It is insisted by some that it is pro-
duced by Kino or miasmata, thus giving it a com-

mon origin with intermittent, remittent and
the other forms of fever which ordinarlly prevail
in malarious districts, while others again, insist
that idio-miasmata is the only agent known,
which is capable of producing this form of fever.

That whenever this poison is brought
to operate upon the human system in a form
Sufficiently concentrated to produce disease at all, Typhoid or Typhus fever will be the result, it being incapable of producing any other form of disease. The opinion has been expressed, and concurred in by quite a number of physicians in the west, south that this disease is produced mainly by filth, insufficient, unhealthy premises, and filth in confinement in confined, very ventilated houses, which opinion, perhaps, had its origin in the fact, that the disease when it first made its appearance in the South, and especially in the South-West, was principally confined to the negroes, the poorer classes of the white population. But since this disease has ceased to be confined to any particular class of our citizens, it now with equal impunity enters the palace of the rich and the home of the poor, the mansion of the lord and the cabin of the slave, this once favourite doctrine of western and southern practitioners must be abandoned; the causes producing Typhoid fever sought for elsewhere.
thought go on & fill up the space usually assigned for a paper like this, in giving the vaguest notions, un-
mannered theories & exploded doctrines of authors & practical men, in reference to the causes which ordinary produce typhoid fever. The whole \nmap, when thus embedded, instead of throwing additional light upon the subject filling the mind of the student, in regard to the true causes of this disease, would only serve to convince the reflecting temperate mind, that the whole matter as yet, was enveloped in uncertainty & obscur-
ty, that the profession had arrived at nothing certain or definite, in relation to the causes which generate that form of fever which is now contributing more largely to the graves of the South-western states than any other sin-
gle form of disease. From our observations & researches upon this subject, we felt satisfied that the causes of this disease are to be found, alone, in the malaria
which ordinarily produce desirables, intermittent
yards of the other forms of fever common to
this climate. At an earlier period in the history
of this country, when a vast amount of great tim-
ber was being felled, weakened, in the setting
of barns, the large portions of land
in this surface, which had hitherto been sheltered
by the dense foliage of the virgin forests, exposed
from the action of the sun's rays, upon the accu-
sulation of vegetable matter, which had been
deposited from year to year thus exposed, the rapid
decay of the great timber, the sudden exposure to
the action of the sun. Such an amount of vegeta-
table matter in a state of decomposition. The upturn-
ing by the plough, of the substrata of the earth,
which were made up of the annual vegetable depos-
sit, of the consequent escape of the long pent up no-
cious respiration, pungent gases, all contributed to
change the atmosphere, with impurities so dense
Concentrated as at once to impel Gorgias to
sympathy of almost all who came within their way.
produce the highest grades of bilious fever, which
then constituted the chief cause of produced
nine-tenths of the mortality in this country.
These forms of fever increased pari passu
with the clearing settling of the country, then
declined in the same ratio until now it is a
rare chance to meet with a well marked case
of bilious fever. The same causes which then
produced bilious fevers now give rise to typhoid
fevers. The causes do not now exist, in a form,
sufficiently concentrated, to produce the former
grades of fever, by suddenly impressing overpowers
the system, but yet they exist in a form
sufficiently, if kept up for a length of time, to
cause slowly to find their way into the system,
through the medium of the lungs, stomach
to produce the form of fever now under
considerations. Our observations have induced me to believe, that these causes marsh miasmata, malaria, or whatever you may please to term them, for worse or better, for named, find their way into the system through the lungs. Disease make their primary impressions upon the nerves of these organs, which becoming thus poisoned, is effectual, first to supply the digestive, assimilating, and excreting apparatus with the necessary nervous energy or influence. Consequently these systems of organs, necessary, fail to perform their functions in a proper and healthful manner. Thus a train of morbid or diseased action is established in these organs, the effect of which will be seen first in the character of the body. A blood which they produce, as necessarily as would the corruption of a fountain, be manifested by the character of the stream which it sends forth.
The question here naturally arises, in what does this altered condition of the blood consist, what are its deviations from health? We regret that we have never had an opportunity to witness the analysis of the blood of a typhoid patient, but if we look to the symptoms which characterize the disease, they will paint with an unerring index its not to its specific or chemical alterations, its general morbid condition. An ocular inspection of the blood shows, when discovered, never fails to verify what the symptoms suggest. viz., a morbid disproportion between its solid and fluid portions, the former predominating. Among the first symptoms which are manifested in this disease, as has already been stated, is a tunnelled heart, disagreeable sensation about the head, slight difficulty in breathing, oppression about the chest, accompanied by a general feeling of lassitude. In indisposition to both mental and corporal exertion, the patient
complaints of sneeze or headache in the eye. The conjunctivae is generally injected with the red globules of the blood. How can we account for the occurrence of these symptoms, upon rational principles, otherwise, than by attributing them to state of the blood which were mentioned. By this marked disproportion between the solid and fluid portions of the blood, it is rendered unfit for the nourishment of the various organs, systems of organs, which make up the animal economy. It cannot circulate with its accustomed freedom through the more delicate structures, as the brain's membranes, the coatings of the eye, the lungs. Therefore, we are, at an early stage of the disease presented with the above symptoms, which must regard as so many evidences of the existence of a state of capillary engorgement of these organs. These symptoms of depression & capillary congestion are always present in the early
stage of the disease, after an indefinite period of time, varying from twenty-four hours to several days, according to circumstances, give place to symptoms of inflammation, the legitimate result of continuous capillary engorgement which is manifested by the predominance of febrile excitement, a hot dry skin, flushed cheeks, a quick frequent and convex pulse, pain in the head and other accompaniments by such other symptoms as ordinarily indicate an inflammatory attack of the particular organs or system of organs upon which the onset of the disease happens to fall. We do not mean remember to have seen a single case of typhoid, fever or to have been conversant with the history of a case, which was allowed to run its course, up to the sixth day, without the development of symptoms, clearly indicating the existence of inflammatory action, either in the brain or its membranous, the lungs or the mucous lining of the
alimentary canal, with the exception of some cases which occurred in a particular locality in Wilson County, in the fall of the year 1852, in which the symptoms of congestion and oppression continued to increase, until the solid portions of the blood seemed to become disorganized. Of these cases immediately terminated fatally soon after the discharge of large quantities of dark, particulate liquid blood either from the bowel, vagina, stomach or lungs. Of several of the cases in which the hemorrhage was from the vagina, the patients were young females upon whom the function of menstruation had not been established. In these cases I think it reasonable to conclude, that the blood is so thickened, the vital energies so much impaired, that the action of the heart, even under the extraordinary efforts which nature usually makes to overcome undue obstruction, fails to maintain a regular and healthful circulation.
The congestion increases, the blood becomes stationary in the vascular structures, instead of inflammation which would be the result where the contest between nature and disease was more equal; nature succumbs to decomposition of the accumulated mass of blood. The contents of the vessels which contain it, if the vessel when the vessel give way of the hemolytic fluids occur (which are of a passive character from coagulated and usually continue several hours after death.

**Treatment.**

From what has already been said in relation to the etiology, pathology of this form of fever, it would appear that the morbid condition of the blood itself, the nervously depression of the sphygmographic engorgement of the brain, lungs, liver, 

The cappillary engorgement of the brain, lungs, liver, etc. constitute the immediate cause of the various symptoms which characterize this disease in its early stages. Our principle
The primary object, therefore, should be to correct this condition of the blood, recover the nervous energy, remove languid and languishing engagements, and restore the functions of the liver, skin, kidneys. To answer these purposes, it seems to me that the treatment should be commenced by venesection, practiced in a bold and decisive manner. By the abstraction of blood, a portion of the thickened morbid, circulatory map will be withdrawn from the vessels, which empty into the heart; that organ will thus be relieved of a portion of the blood which is pressing upon it. Embled by a diminished amount of blood to maintain the circulation. If I mistake not, authors argue, that there is a law in the animal economy requiring a certain degree of distillation of the blood vessels to be kept up; and that if a portion of their contents be withdrawn, the absorptive vessels immediately seize upon the fluids.
which are presented to convey them into the blood vessels to supply the deficient. This idea is strongly urged if not proven to be correct by the thirst of the patient desire for drink in every case of exhaustion from loss of blood. If these views be correct, by venesection we not only relieve the heart by diminishing the amount of blood but we invite into the vessels fluid sufficient to restore the balance between its solid and fluid portions, thus facilitating its circulation 

fitting it qualifying it for the nourishment of the body. We may be incorrect in our views of the manner in which the abstraction of blood operates in cases of this character, but we know that we have seen typhoid patients bled, who at the commencement of the bleeding had a slow, hard, quiet, frequent pulse. At its close, or very soon thereafter, the pulse had twice its former volume, was soft and reduced twenty to
stays to the minute. After the abstraction of blood, if there exists no visceral inflammation, or other symptoms contra-indicating its use, an emetic of Opium, well proven serviceable by removing local congestion, equalizing the circulation, draining the nervous energies of the whole system. As the thirst is usually urgent after the abstraction of blood, the exhibition of an emetic, the patient should be allowed to partake freely of some bland mucilaginous drink, as Gum Arabic water, green tea, or other fluids as will be readily taken up by the absorbents and carried into the circulation to restore the deficiency caused by the loss of blood. To restore the action of the Liver, small portions of Calomel, in combination with Opium, has rendered good purposes in the treatment of this disease. From one to two grs. of Calomel,ポート of Opium, ¼ or ½ gr. of Opium...
may be given every three hours or continued until the evacuations become mixed with bilious matter. If the bowels are torpid, there is no evacuation from them in 36 or 48 hours after the use of the galenic, it should be withheld to full dose of castor oil given. If the cerebral disturbance is considerable, the opium should be omitted altogether. After the function of the liver has restored, if the case is not complicated with some vesical inflammation, a mild course of tormented dyspepsies will usually complete the cure. If vesical inflammation occurs in the course of the disease, it must be counteracted by active antiphlogistic treatment, the use of external resolution and contusionant applications as blisters, subfaciens, warm stimulating poultices, and applications, topical bleeding by leeches or cups is a most powerful means for subduing local inflammatory action. It should
never be neglected, or lost sight of in the treatment of this disease. When the stage of sinking or collapse supervenes the principle care of the physician should be to instill all the powers of the system, which is best accomplished by a general course of tonics and stimulants. Among this class of remedies, those which are most generally used in the treatment of this disease, are quinine, tarantula, mustard and vine and manure. In some extreme cases where the hands were much involved, the discharge frequent, very offensive, mixed with dark fluid blood, we have known the happiest results to follow the administration of the nit of silver, in doses of from \( \frac{1}{4} \) to \( \frac{1}{2} \) gr every five or six hours. Since these salts in doses from 3 to 10 grs. combined with 3 grs. of nitrogren every 3 hours. In prostrated cases of this disease, occasional ablutions of the whole surface of the body, with soap and warm water.
will prove a valuable auxiliary. It removes from the surface the dead dry cuticle, the offensive descriptions of the skin induces general perspiration.

It is of the utmost importance that particular attention be paid to the regulation of the diet throughout the whole course of the disease. The simplest articles alone should be allowed as liquid preparations of arrow-root, rice boiled with gruel, beef-tea, weak chicken broth, etc. It is sometimes the case that after a total want of appetite for a considerable length of time the patient suddenly begins to crave for certain strong stimulating articles of food, such as salt-meat, lamp's vegetables, fruit, etc., while he loathes every article of food usually prescribed by the physician. When under these circumstances, the patient manifests a strong desire to indulge in these coarse articles of food, it would be proper cautiously to gratify the newly aroused appe
title, however much it may conflict with the di-
static rules usually adopted in the management
of this disease.

Nates.

27. Page read if the patient be of full habits
the treatment should be commenced
by evacuation.

27. Page. With the colonnet, Speed. Opium, Laper-
stone would be beneficial as an alterative,
but, when the mucous membrane of the bowel
are in a state of ulceration. Iperitoneum, does
good by actual contact, as well as by its. Hermetic.
alterative effects.