

AN
INAUGURAL DISSERTATION
ON

Typhoid Fever

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The following remarks will be devoted to one of the febrile diseases; which is very variable in its symptoms, but having certain characters, which constitute the same disease in its various grades and forms

Lymphoid Fever

This fever is so very insidious in its attack, that the patient cannot mark the precise time of the attack; he feels uneomfortable, with soreness of the limbs, and a great depression of the nervous system, which amounts to great lassitude, and languor, attended with a gradual loss of appetite. In the course of four or five days he is seized with a chill, which is followed by more or less fever which is marked with slight remissions for a few days, but becomes more continued. The tongue has a slight white coat at this stage of the disease. After the chill he complains of severe headache, and pain in his back and limbs. The face is flushed on one cheek and pale on the other, and if the last become flushed, the first turns pale, so it is thought, that we never have them both flushed at the same moment.

During the incipency of the disease there is generally some disposition to diarrhoea, and the mildest cathartics when given, have a great tendency to purge, even in very small doses. Generally at about the eighth day the disease is fully formed, and shows all the common appearances of fever: viz, a frequent pulse, dry and hot skin, loss of appetite more or less, and thirst with a continual headache and pains of the limbs and back. In some cases the pulse is not more than 90 or 100, per minute, while in others, it ranges from 110 to 130 or 140; in the former it may be full and strong, and in the latter weak and compressible; the former will assist much in a favorable prognosis, while the latter condition of the pulse is very unfavorable.

Frequently there is restlessness with inability to sleep; some times pains in the limbs and back with headache are almost the only complaints made by the patient; and in this condition the symptoms are the same for several days with the exception of a gradual increase in the severity of the disease. The pulse becomes more frequent and weaker; the skin arid and cracked; a dusky face, with a listless countenance instead of the flushed complexion.

The tongue coats itself with ^{white} a thick fur, and is dry and clammy with the tip and edges red; it, at the same time, becomes thick and narrow, and the patient cannot be induced to spread out the tongue flat, because of the irascibility, &c. &c.

In a short time the fur turns from white to yellow and then black, and dry, which begins on the median line, spreading out until it covers over a greater part of the upper surface of the organ, these conditions are accomplished by the ninth or tenth day. And about this time there is a tympanitic distention of the bowels, with pain in them, accompanied if not before with diarrhoea. Frequently there is cough, with diagnostic signs of pulmonary disease.

From the tenth to the fourteenth day, small red spots are to be seen upon the abdomen, also small vesicles called sudamina, upon the neck and other parts. At this period the nervous symptoms become more prominent, the headache passes into delirium or stupor, with hardness of hearing; and the tongue is protruded with difficulty, and if the patient is not reminded forgets to draw it back. The disease continuing, becomes more fully developed, in its typhoid conditions, the tongue

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Still remaining dry with dark encrusted fur, and fissures, which sometimes intersect each other; with dark sordes upon the teeth and gums; pulse becomes more frequent and febrile, the skin hot and dry, or hot and cool on different parts of the body at the same time; and twitching of the facial muscles and subsultus tendinum are present also. The patient now in delirium speaks incoherently, smattering half formed sentences - picking at imaginary objects either on the bed clothes or in the air; or else he strives to get out of bed declaring that he is well and not sick; and if some of the above symptoms are present he may sink into complete coma. Involuntary evacuations, and retention of urine take place, also hemorrhage from the bowels or nostrils, with fetidities upon the body, and then the gangrenous eschars are soon seen upon the hips ~~upon~~ and sacrum, showing the loss of vitality in the skin.

When the disease is about to terminate fatally, the pulse gives way, which first becomes very slow and scarcely to be perceived, or else very frequent

and fluttering; all the extremities become cold; and the skin is bathed in a clammy sweat.

When a favorable turn of the disease takes place, the tongue clears off, either gradually, from the tips and edges, which is indicative of a speedy cure or else the tongue clears off in flakes and looks very red and smooth, and if it remains moist, convalescence may take place slowly, but if the tongue should again become dry and coated, which may be done time and again before the health is restored, under such circumstances the disease may become as direful as ever and an impending death will be near at hand if relief is not obtained. If the symptoms are not aggravated in the two conditions just specified, the pulse becomes less frequent and stronger, the skin regains its moisture is cooler and relaxed, while delirium, stupor or coma subsides or gives away to sound sleep, tympanites no longer disturbs the patient, and neither pain nor distention is felt in the bowels, while a desire for food returns. Sometimes while the tongue is flaking off its encrusted coat of fur, very fatal symptoms appear, which may have been caused by eating immoderately, or over exertion, they are those of peritonitis, ^{and} produced

by perforation of the bowels through an ulcerated Tyers gland,

The duration of this fever is about three weeks, some ^{cases} may be longer, others, some shorter.

Some few symptoms may be noticed as diagnostic signs,

Diarrhea, is a constant symptom in the greater number of cases, but occasionally wanting in a few cases, though the bowels are easily purged by medicines. Diarrhea occasionally exist, before fever, but more frequently comes on afterwards. The stools are generally natural in color or rather brownish, sometimes tinged with blood or actual hemorrhage, from the bowels. The diarrhea is dependent on irritation and inflammation of the mucous membrane of the bowels; and the abdomen is painful upon pressure.

Sympnectic is always present more or less in every case; when very great, it disturbs the respiration, which is very injurious to the patient. Its cause is a collection of air in the colon, while the smaller intestines are distended but little.

The rose colored eruption is frequently seen, it is rather prominent, disappears under pressure but returns, when it is removed; the eruption is seen during the second week, though varying in number of spots, the eruption appears in crops, the first

emp fading about the fourth day, while a new crop, makes its appearance; it begins upon the abdomen and passes to the chest and upper extremities.

Sudamina are transparent vesicles, and are seen upon the neck; they occur about the last of the second week.

Hæmorrhage occurs in the most of cases, from the nostrils and frequently from the bowels; the former frequently becomes very troublesome and sometimes dangerous, the latter becoming not only dangerous but a sign of an unfavorable prognosis.

The nervous symptoms are always perplexing and very severe in nearly all cases. The first of these, is headache, which is dull and heavy rather than acute, and it usually gives way in the course of a week or more, to stupor or delirium, and it is absent when they cease to exist.

Stupor is common and commences very early; it is known by the blank and dejected expression of the countenance, a disposition to remain unmolested, and moved when aroused; it generally terminates in stupor or coma. The patient is frequently sleepless, tossing himself about in great restlessness and uneasiness.

Delirium appears in the second week, but may occur earlier

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or later; it is generally mild in most cases, showing the want of a due amount of stimulus or activity in the brain, than an irritation; it is more of a slow wandering of the mind, from one subject to another, than an active delirium. The mind can be made to act correctly on any subject by fixing the mind ~~the~~ upon it. Sometimes the delirium is frantic and acts violently in some cases. Sometimes it is hysterical with imaginary cares and occupations. Hardness of hearing is very common but varies much in degree.

The skin itches easily, from blisters, and pressure, which is said to be caused ~~from~~ by the full powers of the circulation, and the deranged powers of the nervous system.

Retention of urine is frequent in advanced stages, the sensibility being defective, the bladder is unable to give that impression to the nervous centre, through ~~the~~ the nerves, under such circumstances the urine remains undischarged, the muscular coat becomes more and more debilitated as the distention increases, and the contractile power of the muscular fibre, is more or less lost before the mind feels the impression or want to micturate. When there is complete insensibility

no urinous is evinced by the unconscious mind, but if some sensibility still remain the patient refers it to the region of the bladder or the he is restless and moans. Involuntary Stillidium of urine takes place under such circumstances.

Occasionally there is nausea and vomiting with decided gastric and hepatic symptoms as is shown by tenderness in the epigastric region and bilious vomiting.

Frequently pectoral symptoms are the leading characters such as pneumonia or bronchitis.

The brain is sometimes, though not frequent, the seat of all pain, delirium or stupor attracts the attention, while they may be associated with inflammation of the membranes of the brain, or else they may be the effect of a wanted action in the brain dependant either on a loss of power or an altered state of the blood.

tomical
vectors
The continued fever, and long duration, produce inflammation in many of the organs. The glands of Peyer are found inflamed and ulcerated in all cases yet examined after death, which shows that there is something peculiar existing between the fever and inflammation of the glands.

The glands of Tyer have been found in a diseased state as early as the sixth day. At first the patches are seen to be thicker, and raised two or three lines, the largest being from one to three inches long, and about half an inch wide; they are situated in the ileum opposite the mesentery, and their longest diameter being in the direction of the intestine.

There are two kinds in the same case, the hard and soft, the former scarcely ever ulcerated but undergoing resolution; they look yellowish and white, and hard to the touch, and always found beneath the mucous coat, resting on the muscular.

The latter do not look so white, nor elevated only when the mucous membrane is found thickened over them in the advanced stages of the disease. They do not all originate at once; the first that make their appearance are nearest the ileo-caecal valve, they mature and ulcerate, while others still nearer the jejunum are going through the inflammatory stage. The soft variety always pass ~~to~~ into the ulcerative stage. The floor of the ulcers is sometimes on the muscular coat and again others are found on the peritoneal coat, while others, in some cases, perforate the peritoneal coat.

The solitary mucous follicles of the ileum and mesenteric glands frequently show signs of inflammation and ulceration. The lungs and brain are sometimes found congested and inflamed, though they were not produced by the fever but only accidental, during its course.

The cause of typhoid fever is not well understood. It is thought to be some peculiar poison, existing in the atmosphere, or else a peculiar condition of the system, which absorbs this peculiar poison, when brought in contact with it. An ill condition of health, accompanied with fatigue, and late hours at night, all combined, have a tendency to lower not only the physical but the nervous system likewise, which renders the victim more susceptible to the poisonous influence; which no doubt is produced to some extent, by badly ventilated sleeping apartments, whether ships, hospitals, or other places of confinement, of large numbers of individuals. Buildings so constructed that air cannot circulate under the floor, is said to be a prolific cause of this fever. It is found mostly to exist, in the mountains and high lands.

through occasionally it is seen in malarious districts,
 New England is said to be its endemic home, yet
 'an emigrant' to any locality, where it can find the
 peculiar effluvia upon which it subsists, which maybe
 said to be unreliability of any description.

Changeable weather, exposure to the sun and mental
 anxieties are exciting causes.

There is nothing definite known concerning its
 nature; it is supposed to have some relation to the
 exanthematous disease, or on account of the appearance
 of Pejer's glands, rose-colored spots &c.

The slowness and insidious mode of attack is charac-
 teristic of this fever; diarrhoea and epistaxis are frequent
 in most cases; the cough, with the dry brown or black
 tongue, with red tip and edges between the eight and
 tenth day, are all sure signs of typhoid fever. The tympani-
 tics, rose-colored spots, sudamina, diarrhoea, stupor and
 delirium, which always occur, still more confirm
 the diagnosis. Typhoid fever is known from bilious
 remittent fever, by the shorter duration of the latter, and

more marked remissions; bilious remittent has neither subamina nor roseoloric spots, and very little if any tympanites; while gastritis is a frequent symptom of bilious fever, but never in typhoid, unless accidental.

The glands of Peyer are never diseased in bilious fever.

Hemorrhage is never a symptom in bilious, but most always present in typhoid, and a very good symptom.

The prognosis is thought to be favorable: it cannot be suddenly stoped in its progress, but it can often be conducted to a favorable termination; and no case should be looked upon as being beyond the reach of remedies. The favorable symptoms are diminished heat of ^{the} skin, the pulse less frequent and stronger; the tongue becomes moist and begins to clear off its dark coat of fur; while the secretions are being restored to their normal actions.

In the beginning of all cases, there certainly can be no objection urged against a mild cathartic; the bowels are loaded with the foul secretions of the mucous membrane which give much irritation and is the cause, of frequent

Stools; therefore a small dose of castor oil or saline cathartic will act very beneficial, combined with ten drops of laudanum, if the bowels are painful;

It will not do to give tartar emetic for two reasons, first because of its power of producing ulceration, and secondly it diminishes the relative proportion of the fibrine of the blood, and ^{it} must be remembered that this fever always decreases the fibrine of the blood, and it cannot be rational treatment to administer a drug which will produce the like result. And for ~~the~~ like reasoning we would refrain giving mercury, it greatly diminishes the fibrine and produces much prostration, which are two results we wish to prevent.

The main treatment should consist of, but few drugs and to counteract the causes that produce the fever.

The sick room should be thoroughly ventilated, the floor should be scoured every day,* and the walls ought to be white wash at least once or ~~twice~~ side of lime be kept in the room at all times. The bed clothes should be changed every day, and clean linen put on the patient every day.

* With a damp or wet rag

The patient should be washed or sparged with cold water, every day, over the entire surface of the body, it cools the skin, and lowers the temperature of the whole body. Where there is much tenderness or soreness in the hands, dry cupping, or large marsh poultices may be applied to the abdomen, and continued for many days they will be likely to mitigate the tenderness very much. It is probable, blisters might be of benefit, in obstinate pains and tenderness in the right iliac region, by counter irritation, but they should not be neglected when applied, for fear of serious ulceration of the blistered surface. The diarrhoea should not be allowed to become too exhausting, opium and sugar of lead, should be used in proportion to the results desired. Although moderate diarrhoea should not be interfered with, more than to mitigate the pain.

Nervous symptoms, may be treated, with sweet spirits of nitre, and with the preparations of opium. Leeches or cups may be useful in, headache or delirium

The patient should be allowed to drink cold water when ever he desires it, or to let pieces of ice dissolve on his tongue. Refrigerating drinks such as the effervescent draught, small quantities of the acidity powder, or soda powder with the essence of lemon or lemonade may be given every day, which will perform a double purpose; cooling and refreshing to the patient, and they will act as a mild cathartic also.

The oil of turpentine is an invaluable remedy in this disease; we have found no therapeutic agent half so useful in typhoid fever as it is yet it cannot be said to be a specific in this disease though its action is very favorable to such a conclusion.

"The oil should be given from the very commencement to the end of the disease; it should be given in doses, from five to ten drops every four hours, mixed with gum arabic mucilage and sugar.

Its modus operandi is not well known as yet, though it is thought, by some therapeutist, to bring about an elimination, through the action it has on the kidneys, of

some peculiar poisonous products of the disease
~~found~~ existing either in the solids or fluids of the body,
 thereby restoring the system to its normal condition,
 which is favorable to convalescence. It also exerts a benefi-
 cial influence, by being thrown off or out of the circu-
 lation into the bowels, coming directly in contact
 with the elevated Peyer glands, thereby stimulating
 them and producing resolution. And it acts also by
 its stimulating qualities, which supersede the use of
 other stimulants. Strangury produced by the use
 of turpentine is only a favorable symptom, and we
 should still persist in the use of the turpentine.

In retention of urine, the catheter should be
 used day after day, until there is no ~~far~~ farther need
 of it.

The debility, when it comes, should be attended
 to; stimulants are to be given in proportion
 to the debility in each individual case. Whiskey is
 the best stimulant, but it must be a pure article.
 Carbonate of ammonia is sometimes given, also.

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brandy if nothing else can be had. Opium is a fine
stimulant in debility where there is no delirium
or stupor or when it does not ~~ex~~ aggravate such
symptoms, but on the contrary dispel them,
promote sleep and produce rest. Keshu patients may
probably be used in some cases.

Hemorrhage from the bowels must be treated with
hise or sugar ^{of lead} with opium, but all remedies some
times fail under this condition. Hemorrhage from
the nostrils should be treated by plugging up the
posterior and anterior nares, when other remedies fail.

In peritonitis produced by perforation of the
bowels, large doses of opium should be given, with
perfect rest enjoined, but no indication can be of
any advantage and but little hopes for the recov-
ery of the patient.

The patient should have a mild and easily digested
diet, such as vegetable jellies, and arrowroot, in the
beginning, and afterwards panada and milk may
be allowed more freely, and still later in the

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disease, animal broths, as chicken soup, beef
tea, and soft boiled eggs, or eggs beat up with
wine must be given, in proportion as the
debility increases.

It is not necessary to give the treatment
of the inflammatory diseases, which accompany typhoid
fever, and are more accidental. They must be treat-
ed according to general antiphlogistic principles.