

**Observations on the so-called remittent fever of children : and on the febrile state in general / by W.H. Day.**

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OBSERVATIONS ON THE SO-CALLED  
REMITTENT FEVER OF  
CHILDREN,

AND  
ON THE FEBRILE STATE IN GENERAL,

BY  
W. H. DAY, M.D.,

MEMBER OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON,  
PHYSICIAN TO THE SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.

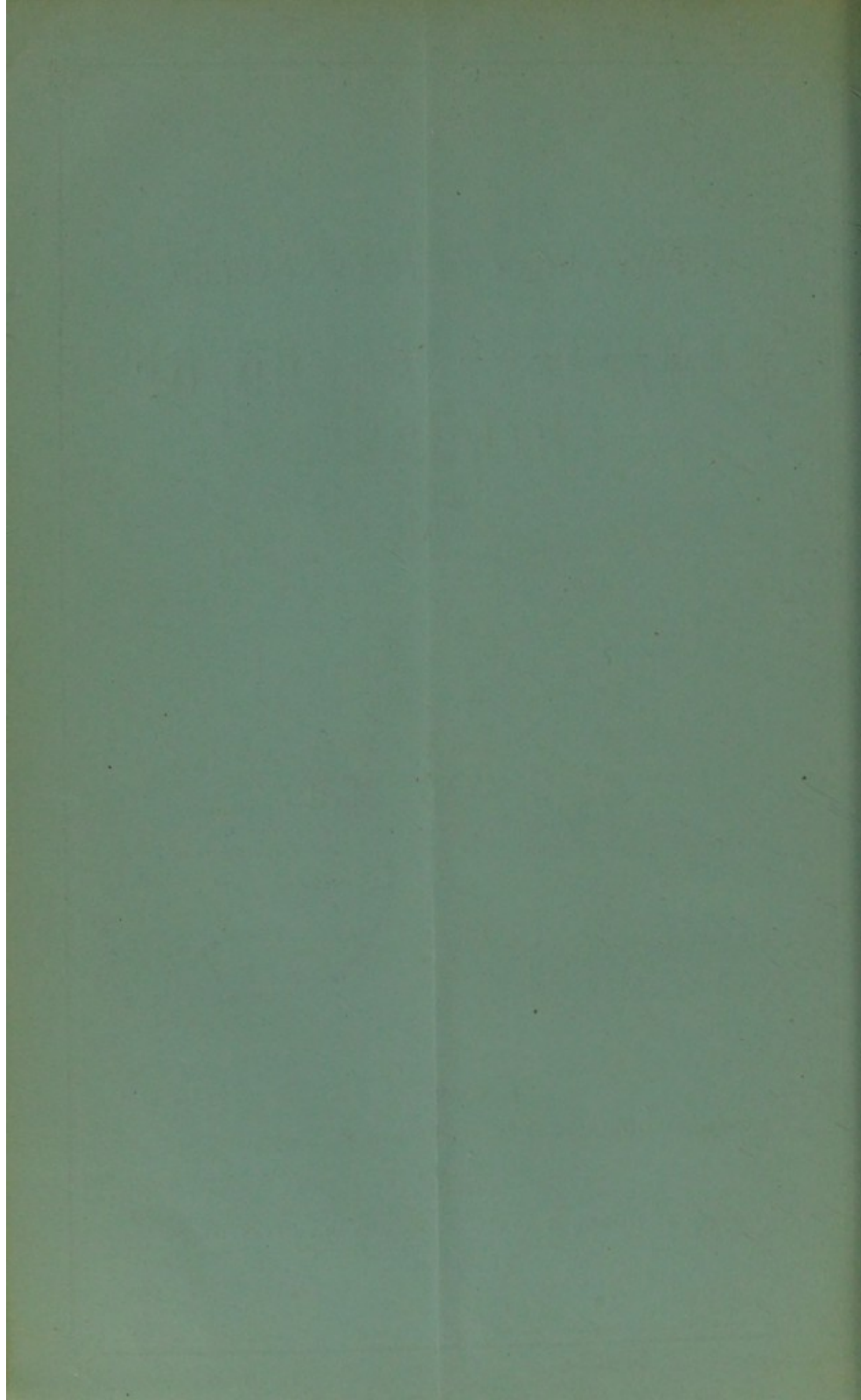


[READ BEFORE THE HARVEIAN SOCIETY OF LONDON, FEBRUARY 1st, 1872.]

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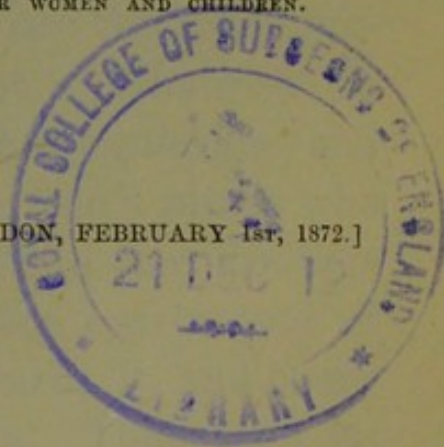
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ORIGINATOR OF THE METHOD

TO REVOLUTIONARY

CHILDREN

FOR THE REVOLUTIONARY

W. H. A. J. M.



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PRACTICAL medicine has made of late years such rapid strides, that to invest any of its varied subjects with interest we require to bring the charm of novelty to bear upon it. Medicine will have a right to lay some claim to this, if accuracy of observation has once more exposed the fallacies of long accepted dogmas, and laid bare the crude pretensions of ill-digested thought. Whatever in medicine is advanced as mere speculation and grows out of the fancy of those men's minds who have not closely watched nature in her dealings with disease, resembles an edifice constructed of bad materials: every breeze disturbs it, and every storm shakes it to the foundation. Time tests its strength—time which in medicine as in morals gradually dispels doubt and mystery, and sheds a true light on all things.

It may be accepted as a fundamental axiom that diseases, being a departure from what we term

health, (itself a condition not absolutely at the same point in all persons,) cannot be universally alike in their manifestations. Although the same disease may have originated from the same recognised causes, past and present health will influence its development, and modify it to such an extent that the same disease will widely differ in two individuals. When the general health is reduced, and exhaustion is marked in every act and function, inflammatory and nervous affections are prone to spring up. Debility once established will awaken such diseases on slight provocation, and call them into threatening activity. On the other hand, it appears equally certain that diseases spring up now and then when the health is good, and patients are following their accustomed avocations. This is unquestionably the case with many febrile affections, and notably among them is that which is to engage our attention this evening.

The subject of fever is one so vast and inexhaustible in its bearing, and its phenomena are so exposed to varied interpretations, that it can never lack interest. It enters the hovels of the poor, and the palaces of the rich, and year by year strikes down thousands of our population, in all the pride and bloom of life. It lurks stealthily concealed in our modern dwellings, and asserts its sway by periodical fits of revenge. It has hitherto defied all sanitary measures, and travelled in the rear of civilization.

The appellation of Remittent Fever is derived from the exacerbations and remissions that attend it, and there is always present more or less of gastro-intestinal disorder.

Some years ago two cases came before my notice, and they made a great impression on me. Subsequent experience of similar though less severe cases confirms me in the opinion that although under the head of Typhoid Fever we shall find an appropriate name for a disease essentially of the same type and family, there are cases, I should rather say stages, of the real impending typhoid fever which are better expressed by the term Infantile Remittent Fever. But if the profession will accept the name in ordinary cases as something akin to typhoid, though usually a less and shorter fever, it may be retained with advantage.

Now enteric fever in its early stages in children, and especially in mild cases, is frequently characterised by some symptoms not common to the adult, partly it may be said because the fever process will vary according to the age of the individual attacked, and partly because the danger to life increases with years. The peculiar constitution of childhood and the excitement of early life influence all disease. The pulse runs high and the skin is burning hot from causes that would be insufficient in adults. Temporary disorder of the liver and bowels will rapidly induce this state, as also sudden transitions of temperature from cold to heat, and from heat to

cold, fatigue and excitement through the impressibility of the nervous system in childhood. In adult life the same causes would not be followed by fever, nor by any disturbance of the normal state.

I must disavow at once that I have any belief in infantile remittent fever as caused by a separate and distinct poison, or that the disease differs in its nature or causes from that of typhoid. I can conceive of few greater blunders in practical medicine than to consider this a separate and distinct affection, not following the same course as typhoid fever, and not leading to the same complications. To me it seems, however, that there is a condition, to which this term may be applied, without in any way misguiding, and if we must use the name at all, let it be limited to the mildest cases, which usually run a quick course, and do not develope into the severe unmistakeable typhoid.

I would not, however, mix it up with simple febrile disorder, or fever symptomatic of worms, dentition, and visceral derangement, which pass away as quickly as these conditions are remedied; but something more chronic and intractable, usually lasting only a few days in some instances, whilst in others it has the duration and all the attendant complications of the genuine typhoid state. To these milder forms, caused by the imbibition of a small dose of the fever poison, I wish especially to draw attention. If we will accept the term with this understanding it is of value.

In the new nomenclature of diseases, drawn up by the Royal College of Physicians of London in 1869, infantile remittent fever is rightly mentioned as synonymous with enteric fever, and among most medical men I presume its close relationship to this fever is now settled. In France, Germany, and Italy, the writers of these countries acknowledge the same classification. They speak of infantile remittent fever in children as being the same as typhoid fever in the adult, but from the circumstance of giving it this name they certainly recognise some distinctive feature. We hear members of our profession, especially country practitioners, speaking of remittent fever in children as a distinct disease, and in conversations I have had with them on the subject, I have found the prejudice so great and the belief so strong, that it has not been possible to convince them of the identity of the two affections. My main object will be to show that this remittent fever in its severe forms is intimately connected with the course and complications of typhoid fever.

The term Remittent Fever, as we are in the habit of using it, is applicable to those cases of febrile disorder in children which are attended by one or more daily febrile paroxysms and remissions; from the most simple infantile remittent to those severe forms, which, as the cases advance, lose the exacerbations (the only real proof of the disease), and merge into the continued type.

In venturing to elucidate any points connected with remittent fever in children, I am too conscious of trespassing on debateable ground. A separate nomenclature has long been assigned to a condition of febrile disorder for which so ominous a name as typhoid is not demanded in all cases; it is a stage verging on it, and sometimes does pass into it.

I will now read briefly the notes of the first case, they are as follows :—

M. W., æt. sixteen, a pale and delicate girl, was seized at the beginning of April 1861 with an attack of remittent fever, from which she had suffered on two previous occasions. These illnesses appear to have lasted from seven to ten days, and to have passed away without leaving any other consequences than those of debility. The present attack was characterised by a severe evening paroxysm of fever, with an abatement of the symptoms in the morning, the skin becoming cooler, and the pulse dropping in frequency. There was considerable gastro-intestinal disturbance, and the motions were loose and offensive. The abdomen was not swelled, but always hot, and tenderness was experienced on pressure over the region of the spleen at an early period of the illness. Towards the decline of the complaint, pressure could not be borne over the cœcum, and the bowels were inclined to be irritable. On the morning of the 21st of April, at 7 a.m., epistaxis set in, and continued

without intermission till 2 p.m. At this time I found her sitting up in bed, applying a pocket handkerchief to her nose, from which blood was slowly trickling from both nostrils. None escaped into the fauces. She was somewhat pale, but very calm and collected, with a small weak pulse, and had lost about eight ounces of blood altogether. Cold water was applied to the nose and forehead, and pressure to the nostrils with the thumb and finger. She was ordered fifteen minims of dilute sulphuric acid and ten minims of spirits of chloroform, in an ounce of water, every hour.

In half-an-hour the hæmorrhage had ceased, but at 6 p.m. it slightly returned. Two small pieces of sponge saturated in a strong solution of alum were inserted into the nostril. At 8 p.m. oozing was still perceptible. Gallic acid was given internally, and iced water was applied to the nose. At 12 p.m. the sad trickling was still going on. Some powdered oxgalls were blown up the nostrils, and after a time coagula formed, and the bleeding subsided. On the following day (April 22nd, at 2 p.m.) the oozing increased, and the patient felt for the first time some trickling into the fauces.

23rd, 4 a.m.—The oozing is still active, and the nose painful from the presence of coagula. A continuous stream of iced water was thrown through the nasal passages by means of an elastic syringe. At 2 p.m. the anterior and posterior nares were plugged in the usual way.

24th.—A little trickling going on into the fauces, from the plugs having slipped a little; the patient cannot swallow, from the swollen condition of the throat; the prostration is extreme, and the pulse feeble and thready.

25th.—The pulse is 140, very small and feeble, the face has a pallid, death-like aspect; the bowels have acted once. About six ounces of muddy port-wine urine were passed, and the same quantity last evening. The upper half of the left tonsil, back of pharynx, and a small part of the vault of the palate are covered with an ashy grey slough of coagulable lymph or false membrane; deafness is considerable on the left side; deglutition is very painful; extensive sloughing of these parts seems imminent.

26th.—She has slept a good deal during the night, and taken a fair allowance of milk and cream. There is no bleeding from the nose, or return of blood in the urine. The fœtor of the breath is most offensive to the patient and to the attendants. There is some attempt at separation of the diseased from the healthy parts, a superficial ulcerated fissure extends round the diseased surface, which now does not appear likely to involve the uvula, or to extend to any considerable depth. The sloughing has not extended, nor is the sphacelated part darker, but the shallow line of demarcation between the healthy and diseased tissues is better marked.

27th.—The throat is decidedly better, and the breath less foetid; the parotid and submaxillary glands are tender, but there is no salivation. The false membrane or slough is detached in places, leaving the surface smooth and bright-red, without ulceration. The uvula and the rest of the throat have a much more healthy aspect. Small and numerous purple spots (minute extravasations) cover the legs and shoulders, resembling “*purpura hæmorrhagica*.” The pulse remains at 140; the gums are neither swollen nor livid.

May 2nd.—There is great headache, but the throat is rapidly assuming a more healthy appearance.

13th.—The throat is well, with the exception of soreness in swallowing some liquids.

28th.—The most important symptoms now are cough, and night perspiration. There was dulness over the right supra-scapular region, and prolonged vocal resonance; tenderness and tympanitis of abdomen.

At the end of two months from this time the patient was able to walk three or four miles daily without fatigue. The axillary glands suppurated and discharged, leaving two small openings, and there were prominent cervical glands on the right side of the neck. Here the sequelæ are just such as we might expect in a case of ordinary continued fever. The internal hæmorrhage did not occur till

nearly three days after the commencement of the epistaxis, when the blood may fairly be presumed to have become more unhealthy and deficient in its solid constituents. Fever therefore played the chief part in the production of hæmorrhage.

To the condition of the blood must also be referred the pathology of the throat complications. The limit of the extravasation was not transgressed by the sloughing process, and I look upon it that if unhappily the hæmorrhagic tendency had involved the larynx and air passages, the result would have been fatal. The livid spots on the palate and fauces were the same in their nature as the livid spots on the shoulders and extremities, only differing in degree. If the extravasation on the legs had been greater, and the part injured or as rudely handled as the throat, ulceration and sloughing might have followed.

The second case is as follows :—

M. S., æt. twelve and a half years, a nervous and delicate child, was seized with feverish symptoms on Wednesday morning, July 9th, 1861, which left her toward the morning. It recurred in a similar manner on the three following days. The patient and a younger sister have suffered from a similar illness on two previous occasions.

July 12th.—The report states that she was very sick at 8 a.m., and vomited green bile; pulse 120, weak

but regular; skin hot, and inclining to be dry; thirst; surface of body, chest, and abdomen very hot; no headache; belly flat and rather sunken; the liver and spleen are not enlarged, nor is any tenderness complained of on pressing over these organs. The fever runs very high at night.

14th.—She slept well, without delirium or wandering, and has no headache; has been sick once; the motions are dark green and slimy; she is cheerful and bright looking; pulse 100.

15th.—Still improving; pulse 84.

16th.—The febrile symptoms are departing; pulse 76.

17th.—She is much the same, with the exception that the right eyelid is noticed to be tremulous and drooping, as though the third nerve was in some way implicated. The levator palpebræ is elevated perfectly at will; the pupil is normal in size and form; and the eyeball is not in the least directed outward.

18th.—She is going on well; the eyelid is still tremulous, but there is neither strabismus, sickness, nor headache.

19th.—After passing a good night, and noticed by her mother to be going on well, she was suddenly seized with what appears to have been a convulsion:

she tried to speak, but failed, and became restless and unmanageable. At 2 p.m. she was lying calmly on her left side, staring with a fixed gaze wildly about; answered questions sharply, but monosyllabically. When asked if she knew me, she replied, "Yes." When desired to give my name, she appeared confused, and tried to mutter something, but was unable; both pupils are rather dilated, and there is well-marked strabismus on the right side.

At 4 p.m. she was difficult to rouse; the expression was more vacant, and the strabismus greater.

6 p.m.—She is getting restless, and is roused with difficulty; the face is more flushed, and the heat of the scalp is greater; prostration is extreme. Pulse 140, thrilling, but very weak; the action of the heart is rapid, feeble, and fluttering; the pupils are large, and the breathing slightly stertorous.

20th.—At 11 a.m. my report is the following:—She has had slight but frequent action of the bowels during the night, and passed a good deal of urine. She is now very restless, tossing and turning about as if in pain. The biceps muscles of the arms are contracted, and the thumbs are flexed firmly into the palms of the hands; the face is flushed and hot, and the eyelids are closed; the pupils are largely dilated, and almost insensible to light. The pulse is rapid and small, and at times can scarcely be felt;

respiration is short and diaphragmatic; there is frequent moaning. The face turns pallid occasionally, when the muscles relax, and the breathing is performed tranquilly. The heart's impulse is very rapid, and beats feebly and tumultuously against the walls of the chest.

11 p.m.—She lies in profound stupor, breathing comatosely—neither tickling the soles of the feet nor the eyelids is felt. The eyes have lost their brightness, and are sunken in their orbits; the pulse is scarcely perceptible, and the hand, when raised, falls as if belonging to a dead person. She sank at 12.45 p.m.

*Autopsy* sixty hours after death.—The body was thin and well formed. There was considerable rigor mortis remaining, and marks of severe blistering at the back of the neck. The abdomen was sunken and concave. Beyond some trifling vascularity in the lower portion of the stomach and small intestines, no lesion of surface could be found in any part of the intestinal canal. On removing the calvarium the dura mater was found much congested, and dark cerebral veins were seen beneath it. The longitudinal sinus was unusually prominent, and filled with dark clots. The inner surface of this membrane was smooth and injected. On removing the dura mater, dark turgid veins, with their minute ramifications, covered the brain in all directions. The arachnoid was generally inflamed,

particularly over the situation of the frontal bones and temporal fossæ, where it was opaque, smooth, and shining. Beneath there was considerable fluid in these situations, and when the membrane was punctured, an opaque serous fluid oozed out. The pia mater was very vascular, both on the surface of the brain, and where it extended down into the sulci, between the convolutions. The surface of the brain, corresponding with the inflamed arachnoid, bore the faintest blush of redness, and when cut into, very minute extravasated points were observed superficially. The lateral ventricles were distended with fluid, especially the right. The fluid was serous and clear, and contained nothing approaching to purulent matter. The corpora striata and thalami optici were less prominent than in a healthy brain, and decidedly softened, especially the right thalamus, as well as the septum lucidum and fornix. The choroid plexus was very pale. When incised, a portion of the brain tissue adhered to the knife, and a stream of water, allowed to fall on these parts, broke up the brain texture. The cerebral mass was not firm in any part. When the brain was removed, about two ounces of fluid were seen at the base of the brain, and as the lobes of the cerebellum were being raised for the purpose of removal, fluid was seen occupying the upper part of the spinal canal.

It may, I know, be maintained by some here that this case was one of cerebral disease throughout, but

the history, I think, establishes its febrile origin—previous attacks of slight remittent fever soon passing away; the illness beginning with weakness and prostration; general heat of skin, and thirst; indifference rather than anxiety of expression; no headache, fretfulness, or aversion to light or sound, as is usually observed in children about to be attacked with cerebral symptoms; nothing characteristic till the convulsion occurred, ten days from the first day of the illness.

When symptoms of the two affections are plainly drawn, as we read in our text-books, we shall not easily err; but those who have seen much of the cerebral and abdominal diseases of young children must admit the frequent difficulties that beset their path. The worst cases of all for diagnosis are those in which a strumous child is seized with tubercular disease in the abdomen, with diarrhœa and other intestinal symptoms; there is nothing to call attention to the brain till coma or convulsion sets in.

In both the cases related, slight remittent fever, unattended by complications, had been experienced on former occasions, readily yielding to a few alterative doses, followed by quinine. If the disorder had not stopped at this stage it might have grown too strong, and resisted every means at our disposal. All the attacks were proved to have originated in the effluvia arising from the decomposition of organic matter, the dose of the poison imbibed on former

occasions being probably smaller than at the periods fully described above. Dr. Anderson says the marsh poison causes fever in *two* forms—the intermittent and the remittent—the latter of which, in bad cases, becomes continued. It is apparently the intensity of the fever which regulates whether the disease shall be of the one or of the other form.—(*Anderson on Fever*, p. 138).

So it is with the disease we are considering. There may be slight fever, with an evening exacerbation, which soon passes off, leaving the patient quite well; or, on the paroxysmal symptoms imperceptibly vanishing, fever of a continued type may be developed, or fatal meningitis, as we have seen, may ensue. It is the evening exacerbation, followed by remission, which is calculated to mislead, and does mislead. It is a mere symptom of the febrile state, varying in degree in the same way as the pulse, the action of the bowels, and the movements of respiration. In some adults suffering from typhoid fever we witness the evening flush on the cheek with great regularity and persistence. In other cases, with all the symptoms precisely similar, the face is pallid, and without the faintest blush. It points to a recurrence of the febrile condition with greater force, and often indicates, as the disease advances, serious local changes, either in the intestines, thorax, or brain. So far it is a symptom of grave import when it recurs at a late period of the fever, as in the case of H.R.H. the Prince of Wales. The periodical

flushing is not peculiar to fever as fever. It belongs to the nervous system, and may ensue from many causes. Witness the flushing of the face and heat of head in some of the cerebral affections of young children, coming and going like an attack of ague. Or, again, in dentition, nothing is more common than for the child to wake up restless, with hot head and flushed cheeks. Common gastric disturbance will cause the same symptoms, and vanish with an active purge. Fever affects the nervous system through the poisoned state of the blood, and the depression, the reaction, and the subsidence, all depend upon it.

We know that this is the true explanation of the dangerous congestions and inflammation of the liver, lungs, or brain, that are liable to occur in the progress of fever, adding to our difficulties, and taking us out of the prescribed course to meet such serious complications by local depletion, diuretics, stimulants, and so forth.

In the case before us there were restlessness at night, flushing of the face, heat of skin, tenderness of belly and inclination to sickness, and all the symptoms increased in severity at night. The latter phenomenon was the sole point in which the first case differed from ordinary continued fever of a typhoid nature. In this case there was at one period pain on pressing over the region of the spleen, the patient crying out when the hand was placed on the

part, and subsequently some slight gurgling was detected over the cœcum, and the bowels were loose and irritable. May we not fairly come to the conclusion that there are degrees, nay, even varieties of fever, originating from a common cause, which occasionally shade, imperceptibly, one into the other; and that, whilst it is the exception to meet with a case where there is any difficulty in recognising the variety before us, we sometimes see cases in which the symptoms are so finely blended, that it is not invariably easy, certainly not at an early stage, to pronounce which disease we are dealing with? Thus, in the first case in question, the remittent character of the disease was very well marked; but to this was added symptoms which some authors have enumerated as belonging to a distinct affection they call gastric fever, and subsequently symptoms we regard as belonging to typhoid fever. It appears certain that infantile remittent fever, well developed, embraces both these types, or rather that identical symptoms frequently supervene. Let me go another step to illustrate this point. Scarlet fever sometimes runs its course with very anomalous symptoms. The eruption may be so slight as to be hardly noticeable, and where it is noticed it presents such inconclusive characters, that we either mistake it altogether, or, if pressed for an opinion, we are compelled to give a doubtful one. The throat will not always help us, for the soreness may be too slight to be complained of, and if we succeed in getting a view of it, there may be no more redness or vascularity than in a

common sore throat. Moreover, the tongue will not always assist us, for it may remain much as in health, the papillæ not being prominent, and the organ wanting its strawberry character. The physician is called to two children; both are feverish, with a quick pulse and a hot skin, and vomiting—a characteristic symptom in both cases. The one, after an alterative and aperient dose, finds himself well in the morning, whilst the other has an eruption of scarlet fever. There may have been no scarlet fever in the house or neighbourhood to help him in his diagnosis. Two essentially different morbid states are developed apparently from the same cause. Is it a mere coincidence, for simple inflammatory excitement, the result of stomach and liver derangement, to attack one child, and the other to have the rash and other symptoms of scarlet fever; or have both children received the poison to a very unequal extent, rapidly eliminated in the one case, absorbed and retained for the usual period in the other? It seems reconcilable with physiological facts that poisons imbibed in small quantities may, under certain conditions, pass speedily away, having excited little disturbance.

The dose of the scarlatinal poison influences the amount of throat, skin, and kidney affection, and there are scarcely two cases precisely similar. Is it not then within the compass of reason that a small dose of fever poison may have a transitory effect in disturbing the bodily functions, without

causing any symptoms decidedly characteristic of the class of fever prevailing ?

It is not easy to account for the typhoid or scarlatinal poison exerting such variable degrees of severity on different members of one household. One member receives a large share of the poison and dies early in the disease, another imbibes a very small quantity and hardly makes any complaint, whilst a third escapes altogether. All have been living in the same house, and under precisely similar circumstances. There is much mystery, so to speak, in the phenomena of fever ; the tide is easily turned by any impediment in its way, and thus its force and intensity are much influenced. One symptom or set of symptoms stand out in prominence to attest its type, or they are in abeyance, or the system refuses to deviate from its normal state. "I have seen a fever run its course, without any change in the tongue, or without any evacuation from the bowels, or without any increased rapidity of pulse. There may be scarce any heat of skin, there may be no delirium, the patient may sink and die of fever with the calmest and most complete intelligence."—(*Anderson on Fever*, p. 18.)

The second case, although less severe than the first, began with a similar train of symptoms, and yet in one case we have a dangerous amount of hæmorrhage, whilst in the other we have the brain attacked. In one the fever poison expends its viru-

lence on the blood and blood-vessels, and in the other it jeopardises the centre of the nervous system, without affording any clue to such indiscriminate selection. In the first case, the third week had commenced when patients recovering from fever generally begin to show signs of improvement. They had commenced in this case; the pulse was firmer and slower, the tongue was cleaning at the tip and edges, the pain in the body had ceased, and there was no bowel irritation. The powers of digestion were improving also, and there was a commencing elasticity of constitution which augured well. We might have been prepared for the approach of dangerous symptoms had the pulse become fluttering and rapid, and the breathing accelerated, or had diarrhœa set in; but with such constitutional improvement it was hardly to have been expected, and certainly not to have been foretold. There is, however, a caprice in fever which should put us on our guard. The fever poison, assailing the system for weeks, works such degenerate changes in the blood and tissues of the body, that we can never be certain we have landed a case of fever in safety, so long as there is much departure from the standard of general health. Some of the worst cases of epistaxis, hæmaturia, and bleeding from the bowels, have occurred when patients have become convalescent from fever, with clean tongue, regular pulse, and good digestion. If we have reason to think that the tone and quality of the blood have suffered much, either from the

fever itself or the remedies employed to reduce it, we should as early as possible begin such treatment as shall gradually replace the solid constituents that have been destroyed. The hæmorrhages are not altogether confirmatory of the typhoid character of the disease. Any causes that tend to bring about an impoverished condition of the blood may produce the complication. In scurvy and purpura, and fevers of a low type, (in all of which serious hæmorrhage may occur,) the chemical composition of the blood is nearly identical. Intestinal hæmorrhage occurs in typhoid fever without ulceration; it is met with in cases described by some under the vague head of gastric fever. Sometimes, though rarely, a patient succumbs to hæmorrhage in typhus also, and it would seem that the fever poison, whether *typhus* or *typhoid*, but more especially the latter and in the more severe remittent forms which merge into the continued type, leads to the same issue. Variations in the presence of symptoms usually considered diagnostic of a disease are constantly to be met with. Take typhoid fever for instance, and we shall come across cases in which the symptoms widely differ.

In one case you will find rose-coloured maculæ on the chest and the abdomen, and the tongue red and papillæ elongated. There is no tenderness of the belly and no diarrhœa. In another case the fever is of a very low type, partly from the severity of the poison, and partly from the age

and constitution of the patient. The teeth are dry, the tongue is covered with sordes, but there is no diarrhœa. On inspection after death, ulceration is found in the lower part of the ileum. We meet with another case, in which there is a plentiful eruption of rose-coloured spots, but there is no diarrhœa; on the contrary, there is constipation, and the bowels are difficult to move. In another case, there are fever spots and severe headache. In another, delirium at night, severe bowel irritation, and rose-coloured maculæ. These cases, and the two I have related, go to show that the symptoms are not always constant and alike. We cannot say that a case of fever is not typhoid because there exists no diarrhœa, and we cannot predict that there exists no ulceration from its absence. We are accustomed to think that, if the bowels are quiet in fever, the patient has a good chance of doing well, that the intestinal canal is at all events free from any lesion; but what I think is a surer sign of the mucous membrane being healthy is a normal state of the evacuations, without the offensive odour that is present whenever there is ulceration. Perfect uniformity in the order of symptoms does not occur. It would neither be a safe nor a scientific hypothesis to lay down the rule that all diseases possessed their uniform phalanx of symptoms. As the severity and danger of disease are variable, so we shall see that there is a simple form of fever, and a severe form of fever. Both, so far as our present knowledge goes, are intimately

allied, but one is transient and slight, and the other is severe and dangerous. There are degrees between these two states, links in a connecting chain that fill it up and make the whole to harmonise. To draw the line of separation where the colouring of the one shades into the other is always difficult, and often impossible.

There are no two cases of pneumonia exactly alike. One case sets in slowly and insidiously, another with a severe rigor and agonising pain in the chest; another begins with delirium, especially if the subject be young. Neither the physical nor the general signs are alike in all cases.

To go a step further in the direction we commenced, it seems to me that the cases described under the head of gastric fever and typhoid fever are one and the same in their nature, progress, and termination. The stomach may be more involved at one time than at another, as evidenced by the prominent papillæ of the tongue, and the gastric disturbance and vomiting, but it is the same fever notwithstanding.

In endeavouring to draw a distinction between gastric and typhoid fever, all observers must have felt a difficulty, and it does not seem possible to recognise any distinction between the two. Dr. Anderson believes it to be a separate disease from typhoid. He says "its great peculiarity

is its connection with an inflamed or irritated state of the stomach and bowels. The affection of the stomach distinguishes it from enteric fever, while that of the bowels is quite distinct from the follicular lesion proper to that disease. He says it often assumes more or less of a remittent character, which is not observed in the fevers we have been considering, in typhus and typhoid; moreover, the eruption is characterised by a few small insignificant red spots."

There is nothing in Dr. Anderson's description of gastric fever to entitle it to be called a distinct affection. It appears to arise from the same causes as typhoid, and to be attended with precisely the same symptoms. There is no difference in the fever spots, and after death ulceration of the intestines is constantly met with. Cases no doubt are frequent in which typhoid fever sets in with well marked gastric disturbance and vomiting, and such cases have misled some observers to think it a separate disease, but typhoid fever is a disease especially prone to take on a change of symptoms. The skin is hot at one time, and moist at another; the pulse is slow in the morning, and quick in the evening; and in these latter cases the febrile exacerbation is often present.

Into the source of this fever time does not permit me now to pass, but defective drainage and

bad ventilation are, to my mind, quite satisfactory causes; in short, whatever causes typhoid fever—the two being essentially alike.

Few of us comprehend the intimate relation that exists between defective ventilation, and the mortality from convulsions, atrophy, debility, low fevers, &c. The importance of fresh air is not sufficiently appreciated by the public. Bad ventilation is amongst the most fertile causes of disease. In the very young we need not go further for an explanation of that unconquerable debility, which I look upon as the inviter of all the melancholy diatheses to which children are liable. Deprive a child of fresh air, and shut him up in a close and badly-ventilated room, and he will not long breathe his own expired breath, and the products of combustion which are not properly carried off, without enfeebling his constitution and shortening his life. During the three years that I was visiting physician to the Margaret Street Dispensary for Consumption and Diseases of the Chest, I often visited twenty houses in a week; in every house was a case of consumption, or allied disease which too frequently ended in it. The atmosphere of these crowded dwellings is most insufferable, and yet so prejudiced and ignorant are these poor creatures that they are with difficulty induced to open a window. Here it is that low typhoid fever springs up—remittent, if you like—and a whole class of diseases having their origin in deficient food, foul air, and bad drainage.

There is nothing more fatal in the correct diagnosis and interpretation of disease than to dwell exclusively on the importance of one symptom. Taken alone it is frequently valueless, for it may owe its origin to many causes, slight as well as grave; but it is of great moment when several other symptoms known to exist in any typical case are blended together. The liability to error is then reduced. Thus headache is a symptom common to many diseases. Taken in combination with other symptoms, it points to one disease in particular.

In reading symptoms it should be the studious aim of the physician to assign to each singly and collectively their proper significance. The highest mental training calls forth the faculty to observe and deduce, and so to arrange in clear order what appears on the surface to be irrelevant and accidental.

Let it also be borne in mind that constitutional power varies as much as it influences the course of a disease. Vitality is stronger, resistance is greater, in some persons than in others. The degree of local change *after death* in persons who have died, instead of accounting for it, is often slighter than is present in cases that have recovered. I have been lost in amazement many times in my life when I have heard the changes after death plausibly put down as the cause of it. Death has occurred; something must be found to explain it. And why? Is it recon-

cileable with chemistry, and advanced physiological research, to assert that because some diseases end fatally we are to find tangible evidence of the cause of death on dissection? To some constitutional idiosyncrasy, apart from organic change or the effect of specific poison on the blood and nervous system, we must often ascribe the tendency to sink, as we must also range in the order of the mysterious that tenacity of life when all hope of saving it has apparently passed away.

