

Andrus

1860.

Typhus & Typhoid fevers.

W. Andrus

* In consequence of the very superior style
of the composition, and the clear & intelligent
views entertained on the subject. I do not at-
tach importance to some of the distinctive marks
advanced - as p 19, & p 31 - nor am I satisfied that
impure air (sewage emanations) have nothing to
do with production of typhoid.

The analogies and differences between typhus and typhoid fevers have of late years occupied the attention of many eminent physicians, and much careful & rigorous study has been spent in elucidating the important question of the true relations of these two great forms of continued fever, the object being to enable us by a careful comparison of the characteristic features of each, to establish as far as possible, a clear & positive diagnosis.

When we consider that these two forms of continued fever are those which occur most frequently in this country, and are annually so fatal in their results, it is difficult to exaggerate the importance of this diagnosis, either in a practical or a scientific point of view; for, whether

we hold the general opinion that they are distinct diseases, or follow that of others that they are varieties or forms merely of one disease, the necessity of our being able to distinguish them is the same.

To enter upon the question as to whom the merit of first establishing the distinction between typhus & typhoid fevers is due, would require a full & complete discussion of the successive investigations which have led to our actual knowledge on the subject, a task which is quite foreign to the character & subjects of this paper: I shall content myself with mentioning merely a few of those whose labors paved the way till Dr. Jenner in 1849, framed his decided doctrine as to their non-identity.

The recognition of typhoid fever as a distinct variety or form of disease may be said to have originated from the great work of Louis, published in 1829, which laid the foundation as it were of those subsequent researches which were to establish its specific distinctness.

It is the first work on the subject at all events, that presents us with anything like a methodical & complete

description of the disease, as he avoided the mistake, common to the previous continental writers, of mixing up his description of the disease with the epidemics of fever in which probably both typhus and typhoid fevers played a part.

One of the first of those in our own country to draw attention to this important question was Dr. Perry, physician to the Fever Hospital of Glasgow, who, according to Dr. Stewart, maintained and taught the difference between the two eruptions. Dr. Perry, in his paper on the subject, although he distinctly indicates the non-identity of the two fevers, does not dwell much on the difference of their symptoms, his observations having been made principally with a view to assign to typhus its true place among the exanthemata, and to clear up the confusion which then existed as to continued fever.

Dr. A. P. Stewart, after having been taught by Dr. Perry of Glasgow to distinguish the eruptions, devoted much labor to the investigation of the subject, both at home and in Paris, the result of which he embodied in a paper read before

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the Parisian medical society in 1840. He considers the leading points of distinction at great length, drawing attention especially to the difference in regard to the eruptions, the origin and exciting cause, the mode of commencement and the anatomical lesions; and shows that while typhus fever is often caused by the crowding together of numbers of people in badly ventilated places, the origin of typhoid fever from such a cause has never been sufficiently proved: that while typhus is unquestionably contagious, typhoid fever is either not at all so, or only to a very limited degree: that sudden and important crises occur frequently in typhus, and never or very rarely in typhoid fever: that typhoid fever commences more gradually than typhus; that there is no resemblance whatever between their anatomical lesions: and that relapses sometimes occur in typhoid fever, but are never met with in typhus.

~~Collateral observations were being carried out at the same time in America, by Dr Gerhard of Philadelphia, Dr Finckh, Dr Bartlett, Dr Jackson & others. Dr Gerhard did more than perhaps any other towards the elucidation of this subject.~~

Archives générales de Médecine 1839.

~~American J. of Med. Sciences 1837.~~

Med. Examiner Feb: 1840

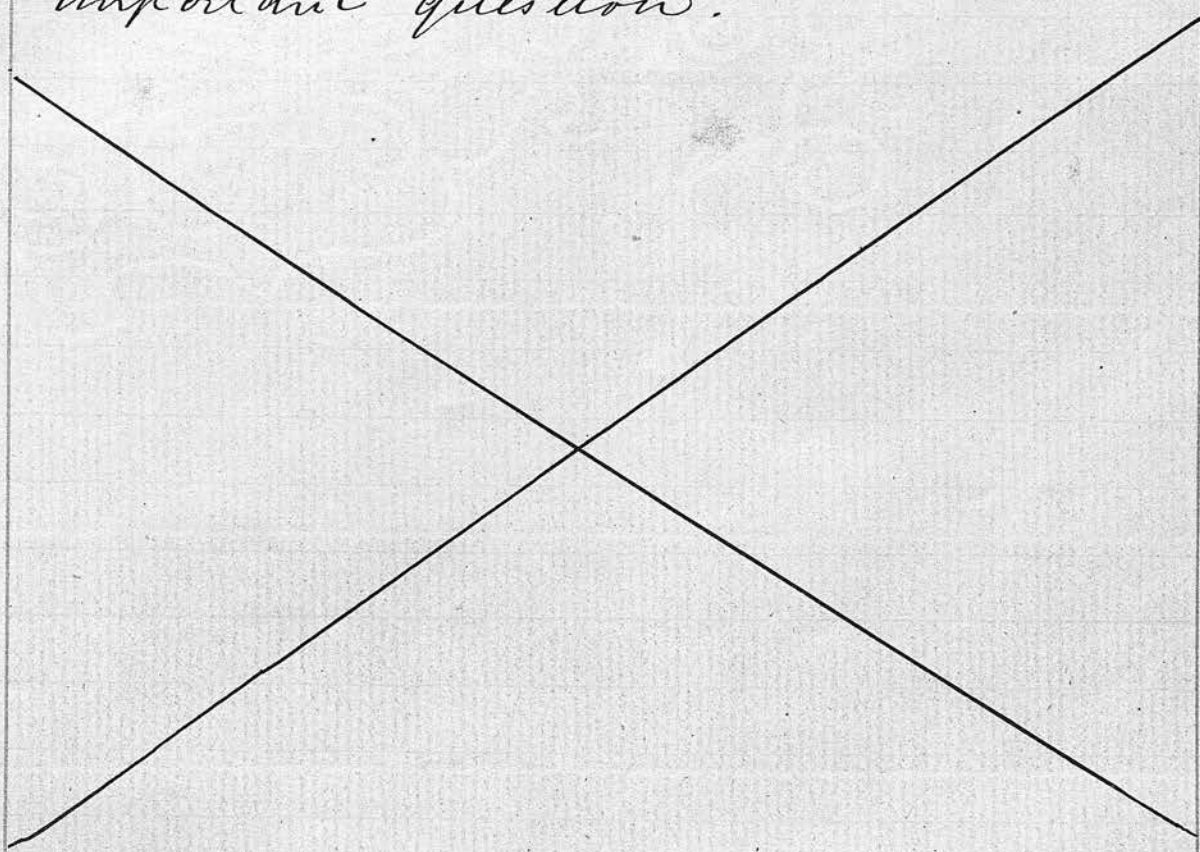
In the year 1839 M. Vallix published a very able analysis of thirteen cases of continued fever communicated to the Medical Society of observation of Paris by Dr Shattuck in which he arrives at the conclusion that both diseases are met with in England & that they are essentially dissimilar; and he bases his distinction of typhoid from typhus fever especially upon the presence of well-marked abdominal symptoms, anatomical lesions, the peculiar eruption and the influence of age upon the liability to the disease.

These conclusions he founded entirely upon the cases furnished by Dr Shattuck who also in his paper in the Medical Examiner expresses his conviction that the two affections as he met with & observed them in the Fever Hospital of London are essentially distinct.

Dr Shattuck's observations, apart from their real value, possess a peculiar interest from

the fact that he had previously studied typhoid fever in Paris under Louis and was consequently perfectly familiar with the continental type of continued fever.

Collateral observations were being carried out at the same time in America, by Dr. Gerhard of Philadelphia, Dr. Pinnock, Dr. Baillotté, Dr. Jackson and others. Dr. Gerhard did more than perhaps any other towards the elucidation of this important question.



American J. of Med: Sciences, 1837.

In conjunction with Dr Pinnoek, he studied carefully the great epidemic of typhus which occurred in Philadelphia in 1836; and being both perfectly familiar with typhoid fever, which in America is as common as typhus with us, they were struck with the great differences which the two forms presented. Dr Gerhard published an account of this epidemic in the American Journal of Medical Sciences, which reflects great credit upon him and Dr Pinnoek for the very able manner in which they noted the essential points of difference between the two diseases. The leading facts in Dr Gerhard's paper, so far as they bear on the question before us, closely correspond with the observations of Dr Stewart, who, it is to be regretted, did not obtain access to Dr Gerhard's paper till long after his own was published.

The question having attracted so much notice here, on the continent, and in America; the French Royal Academy of Medicine proposed a prize for the best paper on the subject, to be awarded in 1837. Two dissertations of great merit, and

London & Edin: Monthly Med: Journal ap. 1849.

holding opposite views of the question, were thought by the examiners of such excellence, that a prize of encouragement was given to each, instead of one prize as originally intended. M. Gaultier de Claubry, the author of the essay maintaining the identity of the two diseases, made the fatal mistake of confounding the camp and jail fever of the continent, with typhus as met with in Great Britain, so that his observations, how far soever they may go to prove the identity between these continental forms, are of no real value in settling the important question of the relations between typhoid fever and the British typhus.

Having thus rapidly sketched the history of the diseases with which we are engaged up till 1849, it is necessary now to notice the appearance of Dr. Sumner's elaborate papers, which brought a flood of light to bear on the question, and served to explain and systematize much that had

been left dark and uncertain by his predecessors. It is certain that to Dr Jenner belongs the credit of having treated this subject in by far the most laborious and complete manner, and it is questionable, if anything in medical literature, could present us with a better model of all that such an investigation ought to be. Dr Jenner made a most elaborate summary and analysis of sixty-six fatal cases of continued fever, all of which he had most carefully observed during life, and all of which were examined by him after death. Of these sixty-six fatal cases he found that twenty three presented lesion of Peyer's glands, while, in the remaining forty-three, the patches were, as far as could be discovered, in their normal condition: he compared the symptoms presented by these two groups, as well as the appearances found after death, and, in endeavouring to settle the question as to the identity or nonidentity of typhus and typhoid fevers, he

makes use of the most rigid induction, and and the most careful analysis of his daily recorded clinical observations; he deprecates the idea of placing any dependance on the memory for such an investigation, makes use of no general statements, and surmises nothing, but bases his conclusions on facts supported by figures, and insists on the necessity of rigid induction. Dr. Jenner adduces an enormous mass of evidence to prove the nonidentity of the two fevers, a nonidentity which he insists on as being not less real than that of small-pox and scarlet fever, or any other essentially distinct diseases. I wish that the limits of this paper would permit me to give an abstract, however short, of all the points of difference considered by Dr. Jenner; but his observations were conducted on such an extended scale that even a recapitulation of them all would be impossible.

The facts brought forward by Dr. Jenner prove that typhus and typhoid fevers differ from each other, like smallpox

Medico-surgical transactions Vol. XXXIII.

and scarlet fever, the main points that he insists upon being:—

- 1st. That the general symptoms differ.
- 2nd. That the eruptions, or diagnostic characters, are never the same.
- 3rd. That the structural lesions, or anatomical characters, invariably met with in the one disease, ~~is~~ never present in the other.
- 4th. That the specific cause of the two diseases is different.
- 5th. That the epidemic constitution influencing the one, has no influence upon the other.

All these points the facts detailed in Dr Jenner's papers most fully bear out.

In a paper read before the Medico-Chirurgical Society of London, in 1849, Dr Jenner has fully considered the question as to the difference in the exciting cause of these fevers. His observations upon this point extend to all the cases admitted into the London Fever Hospital during the

years 1848 and 1849; and he found that the same house never yielded a case both of typhus and typhoid fever with only one exception. To that single exceptional case Dr. Jenner attaches no importance as all practitioners of experience must occasionally have met with similar cases of two entirely distinct diseases occurring in the same house.

Although, since the publication of Dr. Jenner's views, medical opinion may be said to have undergone a great change, we yet find many names of great eminence ranged on opposite sides of this important question; and nothing perhaps could more strikingly illustrate the difficulty of settling such questions, than the fact, that many able observers have derived their opinions from the same cases, and have yet arrived at exactly opposite conclusions. Those maintaining the identity of the two diseases hold, that typhoid fever is merely a variety or form of typhus, and they look upon the lesion

of Peyer's glands, simply as one of the complications of the disease. Many also look upon typhoid fever as typhus, modified by the epidemic constitution. Dr. Jenner concludes his papers by a very able refutation of each of these assertions. Others consider that the two forms or varieties can in some cases be distinguished from each other, during life, while, in many instances, the gradation from the one form of the disease to the other is so insensible, that no such distinction can be established. The supporters of such a view however bring forward very few, if any cases, in which essential distinctions might not be observed, on careful investigation. After all, the question resolves itself into this: that if we have two diseases differing in their most prominent symptoms and in their post-mortem morbid appearances, on what, if not upon these are we to found our distinction? And that these fevers do actually differ in these points will be

Med. Times July 1856.

Med. Times 1854.

Lancet March 1858.

found from an examination even of the writings of those who have laboured to prove their ~~identity~~ identity.

Dr Peacock, in his lectures published in the Medical Times, arrives at the conclusion that they are distinct diseases from observations made upon 106 cases.

Dr Stokes of Dublin considers that the presence of follicular disease observed by him in the great epidemic of 1826, sufficiently warrants the belief that the two diseases are the same, and furthermore, he thinks that the same exciting cause is capable of producing different kinds of fever in different persons, a fact, which appears to him a strong argument in favor of their identity.

Dr Ward, in referring to this subject in his very interesting clinical illustrations of the diseases of the abdominal viscera, gives it as his opinion that typhus and typhoid fevers are essentially & specifically different, having nothing more uncommon than some symptoms which occur in the other exanthemata, and which may occur

as complications, in other forms of disease. He entirely discredits the assertion that the one disease is capable of producing the other, a doctrine which has been brought forward in support of the non-identity of the two fevers; and gives it as the result of his experience of a larger number of cases than has fallen to the lot of most observers that in no one instance was the cause of the one disease traced to the other. Dr. Ward also thinks it possible that individuals residing in the same locality may be affected by the two diseases, owing to the coexistence of the specific exciting cause of each in the same place, and even supposes that the same person may be affected by both diseases at once. He adduces as illustrations twelve well-marked cases of typhoid fever, and, by way of contrast, one equally well-marked of typhus which were carefully observed by him in the Dreadnought Hospital. He shows that while in his cases of typhoid fever the abdominal symptoms

of tenderness, tympanites and diarrhoea were so prominent; in typhus the abdomen was found to be in its natural conditions: and that while in typhoid fever the eruption consisted of rose-coloured spots, which came out in successive crops, on the chest and abdomen; in typhus the characteristic mulberry rash was present on chest, abdomen and extremities.

The same state of medical opinion as that which I have thus hurriedly sketched prevails in America, where, while many maintain the non-identity of the two fevers, they are looked upon by some excellent observers as forms or varieties of one disease.

It is particularly to be regretted that, until late years, American physicians have derived the greater part of their information with regard to continued fever from the British works on typhus, a disease differing in so many important respects from their own type, and that in this way so

Bartlett on the fevers of the United States, 1842.

much confusion has arisen among their ideas of fever in general.

The great classical English works on fever have thus only tended to mislead, as they describe principally a fever almost unknown in America. In New York we have a striking instance of the divided state of medical opinion on the question before us, in the fact, that while Drs Smith and Clark, along with by far the greatest number of observers in that city, maintain the identity of the two diseases, their colleague, the late distinguished Dr Bartlett, in his work on the fevers of the United States, repeatedly expresses his conviction that typhus and typhoid fevers are essentially distinct diseases, and it is worthy of remark that Dr Bartlett's opinions are supported by a much greater number of facts than has been adduced by those who adhere to the opposite side of the question. Dr

Bartlett enters into the discussion at great length, in the most philosophical and impartial manner, and, although

himself fully persuaded of the non-identity, he is ready to admit that those who are opposed to this view of the question have brought forward objections which are well entitled to a more full examination than they have hitherto received, and he is not without hopes that further careful and extensive observations may throw light upon many points that have hitherto appeared obscure. A strong argument, he thinks, against the hypothesis of typhus and typhoid fever being merely varieties of the same disease may be founded on the fact, that while in England both forms are met with (but typhus to a much greater extent) in America and on the continent typhoid fever should be the prevailing type.

There are, no doubt, many points of resemblance between these two affections, as amongst other forms of continued fever, and among acute febrile diseases in general, such as great prostration of the vital powers, alteration of the

functions of the nervous system, the presence of a cutaneous eruption, marked delirium &c. And even more important points of resemblance have been mentioned, but these have been observed principally by those who studied the diseases from epidemics, and it is well-known that nothing is more dangerous than placing any reliance on an observation of all the symptoms which may be presented by a single epidemic, because, in it we may often find a union of many of those symptoms which are generally confined to one disease.

It is also true that two diseases may affect the same person from the coexistence of their exciting causes in the same locality. Even the lesion of Peyer's glands was said to have been found in some fatal cases occurring in epidemics which presented all the other characters of typhus fever, a fact, which were it not for the little dependance to be placed on the observation of any one epidemic, and the doubt which may reasonably be entertained of the accuracy of the

statement, would go far to overthrow ^{the argument} as to the nonidentity of typhus and typhoid fevers.

No one can study the histories of the two diseases without being convinced that there are many great points of difference which go to establish their distinct nature. They differ notably in their symptoms, their causes, their course and duration, and especially in the appearances found after death.

In the first place, the characteristic eruption of each is very different from the other. The specific eruption of typhus is called the measles or mulberry rash and is preceded by a mottling of the surface seeming to involve the whole skin. The spots are of a dun, purplish dingy hue, of an irregular shape, with an illdefined margin, not disappearing so readily on pressure as the typhoid spots. Now, the typhoid eruption differs from this in almost ^{all} respects. It appears about the same stage of the disease, but instead of a flush

involving nearly the whole skin, we have two or three scattered oval or circular spots of a brilliant rose colour, which, like the spots of typhus, disappear upon pressure, with this marked difference, that the former become papular. Another difference between the two eruptions is observed in the fact that while the eruption of typhus comes out, so to speak, once for all, the typhoid spots which have made their appearance about the ninth or eleventh day of the disease, ^{disappear,} and fresh ones may come out till the termination of the disease. The situation occupied by the eruptions also serves to distinguish them to a certain extent; the eruption of typhus extending over the whole body, while the typhoid spots are rarely found but upon the chest and abdomen.

A marked contrast is observed too in their course and duration. The commencement of typhus is generally, though not always, sudden, while the disease steals upon the typhoid patient

in a much more insidious and gradual manner. In typhus there may be relief about the tenth day, when the patient, if he does get well, goes on favourably to the end: but in typhoid fever such relief leads to the suspicion of a relapse, which will most probably be followed by a return, in an aggravated form, of all the symptoms of the disease, and prove almost always fatal. Dr. Stewart was the first to point out this remarkable feature of typhoid fever; so remarkable, that he considers it of itself sufficient to prove the non-identity of the two fevers, as such a state of things is absolutely unknown in typhus.

He is also of opinion that the occurrence of relapses may, in some measure at least, account for the comparatively protracted duration of typhoid fever, which has been found by Dr. Jenner to be one third longer than that of typhus.

Among the most prominent of the intestinal phenomena, characteristic

of typhoid fever, is the diarrhoea which makes its appearance generally in the first week of the disease. It is frequently painless, but often accompanied by dull abdominal pain. The stools are of a light yellow colour, often with dark streaks of blood, and, sometimes it may be, accompanied by considerable hemorrhage. The diarrhoea is generally accompanied by tympanites, gurgling, & tenderness in the right iliac fossa. A more generalised pain ~~indicates~~ and an increase of the febrile symptoms indicates that there is an ulcerated condition of the gland, and that perforation either has taken place or is about to do so. On the cessation of the diarrhoea there is observed a marked amendment, the only danger being, that the intestines may be left in such a state that one of the large mesenteric bloodvessels might give way. Now, while almost all of these abdominal symptoms are generally present in typhoid fever, the abdomen in typhus retains its natural condition,

and instead of diarrhoea being an almost invariable symptom, the bowels are more frequently constipated than otherwise.

The diarrhoea bears a direct relation to what has always been considered as the chief characteristic of typhoid fever and the one which goes furthest to prove its non-identity with typhus, viz., the lesion of the glands of Peyer and the solitary glands, generally accompanied by more or less inflammation of the glands of the mesentery. When death occurs at an early period of the disease, all the change observable in the glands may be only a slight redness, accompanied by a considerable thickening, increase of size & softening, which may extend to a greater number, or only to a few of the glands, those nearest the ileo-caecal valve being always first affected. Occasionally there may be hardening of the patches owing to their containing typhoid deposit beneath the mucous coat.

But these glands instead of presenting merely such simple changes may sometimes be the seat of extensive ulceration which may destroy their whole substance, causing perforation of the bowel which will most likely prove fatal by the induction of peritonitis. Some observers have described the lesions of these glands in a most systematic manner, advertng to several distinct morbid forms which they present before ulceration takes place. The great work of Louis gives a most minute and elaborate description of all the forms of lesion that are met with.

This peculiar structural lesion is so invariably met with in typhoid fever, that it may be considered one of the essential elements of the disease; and it has been ascertained to belong neither to typhus nor any other acute disease whatever; the apparent exceptions to this rule having been shown to be diseases complicated with Typhoid phenomena, as smallpox, scarlatina erysipelas &c. But typhoid phenomena, occurring

under such circumstances, ought never to have been confounded with true typhoid fever, seeing that the lesion does not present the same characters at all, and that the mesenteric glands are almost always unaffected. Dr. Bartlett in considering the constant presence of the intestinal lesion says:—

"I have adduced all the cases that I have been able to find which might seem to constitute exceptions to this general relationship, or to throw doubts upon its invariableness; and the conclusion to which I am irresistibly led is this: that the connection between the diagnostic symptomatology of typhoid fever and the entero-mesenteric lesion is, I will not say absolute and invariable, but as nearly so as the connection between the diagnostic symptoms and the characteristic lesions of any given disease whatever in the nosology, in which this connection is not established by positive physical signs."

In all Dr. Jenner's fatal cases of

typhus the patches were found in their normal condition, with three exceptions which however did not present the characteristic lesions of typhoid fever.

Not only do we meet with an absolutely characteristic feature of typhoid fever in the lesions of the small intestines, but, if we compare the state of the large intestines also in the two diseases, we find a very marked difference in regard to the appearances they present after death. Of twenty cases of typhoid fever which Dr Jenner considered eligible for an analysis on this point, seven, i. e. more than two thirds were found to present ulceration of the caecum and colon; while the large intestines in twenty eight of thirty seven cases of typhus presented nothing abnormal on examination, four only of the remaining nine showing true inflammation of the mucous membrane, and the remaining five being in their normal condition, with the exception of a slight degree of congestion and softening.

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One of the principal differences will be found in the state of the tongue in the two fevers. In typhus it is more frequently dry, and of a dark brown smokedried appearance; while in severe cases of typhoid fever the tongue is generally covered first of all by a moist, yellowish-brown coating and then it may become brown in the centre, having almost always a very marked redness along the edges and at the tip. When dry, it has frequently a smooth, red naked & shining appearance.

As regards the specific exciting cause, there are two points which require especial mention viz; the influence of contagion, and of crowding, filth &c. First, as to contagion: it has been ascertained beyond all doubt that typhoid fever very rarely if ever owes its cause to contagion; while the influence of this cause to a great degree upon the production of typhus has been decidedly

proved. Dr. Ward in referring to this subject in his clinical illustrations says:- "How does our Dreadnought experience bear upon the question of the contagiousness of enteric fever? Although there have been on two occasions ten or twelve cases on the medical deck, neither officers, nurses, nor patients with one exception have fallen victims. In the establishment already alluded to in which so large a number were crowded together at night the cases occurred in an isolated manner and at irregular intervals. Surely, if the disease were in any intelligible sense of the term contagious it would have spread more extensively through so many individuals in constant close contact. I have had a fair experience of the disease in private practice, and have never known an attack which could be conclusively traced to contagion. I can however recall several instances of the disease having appeared in particular houses, in isolated cases, during successive years;

Local nuisances have existed in the vicinity of such houses. It will be evident from what I have thus stated that I am a noncontagionist as regards enteric fever; although I feel quite as strongly as to the contagious character of typhus."

Second, as to crowding filth &c, everyone knows the dependance of typhus upon these causes; and that although they may seem to possess some influence upon the production of typhoid fever, that disease is as often generated in healthy as in unhealthy localities, in fresh as in impure air.

The frequent occurrence of pharyngitis has been shown by Dr Jenner to be characteristic of typhoid fever. It was present in one third of his fatal cases, whereas, in his fatal cases of typhus, ulceration of the pharynx, as a consequence of the fever, was not found in a single instance. The same observer is of opinion that an

intimate relation exists between the occurrence of pharyngitis and laryngitis, as the presence of the latter independently of the former affection is extremely rare.

Among the other morbid appearances met with after death serving to distinguish the two fevers Dr Sumner mentions that in nine out of eleven cases of typhus the pia mater and arachnoid membranes separated from the convolutions of the brain with abnormal facility; while in only one case of typhoid fever was an analogous condition of these parts observed: and that while in typhoid fever hemorrhage into the cavity of the arachnoid is never met with, in five of thirty nine cases of typhus, examined with reference to this point, coagula were found of various sizes and colours.

With regard to the benefits to be derived from a correct pathological view of the two diseases, all that can be said is, that if typhoid fever be a distinct

Lectures on the principles & practice of physic, 1857.

disease and not merely typhus with intestinal complications, a method of treatment may yet be discovered for it as essentially different, Dr Jenner suggests, as that for scarlet fever and measles which were until lately regarded as one disease.

And again, even supposing that they are not distinct diseases, but merely varieties or forms of the same disease, it is yet true that they may require a plan of treatment in every respect dissimilar.

All who have had much experience in the treatment of the two fevers have agreed that typhus fever requires a much more active and stimulating treatment than the typhoid form. Dr Watson states his experience in regard to this point as follows: - "The kind of fever with which I was conversant in London for ten years before the first arrival of the Cholera in this country I now know to have been typhoid fever. The antiphlogistic regimen was indispensable at the outset of the disorder: in many instances bloodletting, either general or topical seemed to be

required, appeared to do good, and certainly was well borne: in well ventilated wards the disease showed no strong tendency to spread; the mortality was very moderate. About the rose coloured spots, ^{upon the skin} I can say nothing for I did not look for them; but the glands of Peyer according to my own experience of the fatal cases, were almost invariably affected. Subsequent epidemics, I may specify particularly that of 1838, offered a marked contrast in all these points. A large percentage of those who contracted the fever died; the disorder was propagated from Hospital patients to nurses and students; after death we could not detect any disease of the agminate or other glands of the intestines; the peculiar mottled rash scarcely ever failed to show itself: we were taught by experience to refrain as much as possible from extracting blood; and almost from the beginning, or quite, we found it necessary to sustain our patients

no ground
of dis-
tinction
- Bay
- Pherson

by a liberal allowance of strong animal broths and even of wine."

There is no doubt that typhus forms our most fatal pestilence or at all events did form it until better sanitary measures were introduced into our great towns. The mortality which before was so great as one in four, has by these means been reduced so low as one in nine, or one in ten. But these means would be of little avail in reducing the liability to typhoid fever, for, it is not generally admitted that filth, famine crowding &c have any influence upon its production, the only circumstances affecting the liability to that disease, concerning which there is any degree of certainty, being, age, recency of residence & to a very small extent, contagion.

Having thus impartially considered the evidence on both sides of this important question, as adduced by the most eminent supporters of either doctrine, I feel irresistibly led to adhere

Medical diagnosis, by A. W. Barclay M.D. 1857.

to the opinion held by Dr Jenner & his followers. The science of medicine has its only true foundation in observation & it behoves us to rely on this alone in forming our opinions & to bear in mind the danger of placing unjustifiable confidence in any theory and "that the question of importance in regard to the treatment of any case is not which theory we will adopt, but what phenomena are actually present & how we may best meet them by suitable treatment, whether there be congestion of the lungs, or ulceration of the bowels, not whether we have got typhus or typhoid fever to deal with."

W. Anderson.