AN ACCOUNT
OF
AN EPIDEMIC OF TYPHOID FEVER,
WHICH
PREVAILED IN BATH,

DURING THE MONTHS OF SEPTEMBER AND OCTOBER, 1849.

By WILLIAM DAVIES, M.D., EDIN.,
PHYSICIAN TO THE BATH UNITED HOSPITAL.

Read before the Bath and Bristol Branch of the Association, Dec. 20th, 1849.

MR. PRESIDENT AND GENTLEMEN,—My object on the present occasion is to bring under your notice, and to place on record, the history of an outbreak of fever which took place in Bath during the last few months. In a paper which I had the honour of reading before the Parent Association in Bath last year, I endeavoured to mark, as distinctly as the ascertained data would admit of, the characteristic features of the most common form of fever which occurs in this country as an epidemic—namely, typhus or maculated fever. My object then was to show that typhus belongs of right to the class of exanthematous fevers, that its peculiarities are nearly, if not quite, as well marked and as constant as those of any other member of that important group, and that hence it is an essential specific malady.

The kind of fever of which I have to speak at present is one of the most philosophically investigated, and consequently best understood maladies to which the human frame is liable. I mean the typhoid fever of Louis, or, as the disease has been variously called,—entero-mesenteric fever, dothenenterite, follicular enteritis, typhoid enteritis, abdominal typhus, and so forth. All these names, (and there are others,) except the first, indicate the characteristic peculiarity of the disease, and it is to this peculiarity that we are in great part indebted for the very complete knowledge which we possess of the natural history of the malady. It possesses a distinct physical character, which the knife of the anatomist is always sufficient to reveal, and no tyro in morbid anatomy who has witnessed one dissection can ever fail to recognize the appearances when he meets with them again. This is one reason: but we must not allow our nationality to blind us to the fact, that we owe nearly all our precise knowledge of the disease to our neighbours the French, and that they do excel us in such minute and patient investigation as is alone fitted for the foundation of a safe induction. British observers altogether until lately and very generally now, approach the subject of fever with a certain bugbear before their minds called unity, and they have done all manner of violence to facts in order to make them harmonize decently with this cherished idol of their imagination; hence the idea of distinct species of fever was not to be tolerated—as many varieties as you like; so, we have had learned disquisitions on synocha, synochus, and typhus, the latter divided into *mitior* and *gravior*, and so forth. We

shall never make much progress in the study of fevers until the last remnant of the unities has disappeared. I have much pleasure in believing this desirable period to be at hand. The present paper is intended as a contribution to that end.

I shall have no difficulty in establishing to your satisfaction that the epidemic I am about to describe was one of typhoid fever; and although I should occupy too much of your time if I stated at length the grounds on which I believe the typhoid fever to be specifically distinct from the typhus, still I hope to be able to say enough to make such a view extremely probable.

Soon after the commencement of the epidemic, which may be safely dated at about the 20th of September, (my friend Dr. MacDermot reminded me of one case which came under his observation as early as the 31st of July, I have not heard of any other equally early,) I saw enough of the nature of the fever to convince me that a record of its progress would not be an uninteresting contribution to our knowledge of epidemic fever; I accordingly sent a circular to every practitioner in Bath, in which were the following queries:—

- 1st. The number of cases met with?
- 2nd. The localities where they occurred?
- 3rd. The duration of the disease up to the period of convalescence being established?
- 4th. Whether there were distinct exacerbations, and if so, at what period of the day did they occur?
- 5th. Whether there was distinct evidence of contagion?
- 6th. Whether there was any eruption on the skin, and if so, at what period did it appear?
- 7th. What, if any local complications were met with?
- 8th. The number of deaths: in the fatal cases, according to what manner did death take place?

With two or three exceptions I received replies from all, and before I proceed further it is proper that I should offer my very grateful thanks to all my professional brethren who have aided me in this investigation, for the prompt and kind manner in which they have afforded me all the information at their disposal, in some instances at the expense of very considerable trouble to themselves. My thanks are also due to the district registrars for kindly furnishing me with the number of deaths from fever which have taken place within the city during the period included by the epidemic. I am indebted in an especial manner to my friend Mr. Field, for much valuable information, statistical and otherwise, which no one is better able to afford.

The entire number of cases reported to me has been 550, deaths 20, giving a proportion of deaths to attacks of nearly 4 per cent. This is, however, below the fact, as at the time I received several of the reports it was stated that some cases remained under treatment with the result still doubtful. The number of deaths from fever registered in the city during the period was 47. This again is above the fact, as the entire number returned as "fever," would not properly belong to the epidemic. We shall probably be near the truth if we add 100 to the number of attacks, to allow for cases

not reported to me, making the total 650, and deduct 7 from the number of deaths registered, which will leave 40, giving a mortality of 1 in 16 nearly, or 6 per cent.

While on the subject of statistics I may take the liberty to correct a very erroneous, and as regards Bath, a very injurious statement, put forth by the Registrar General in his last Quarterly Return, wherein it is stated that the mortality in Bath for the quarter ending 30th of September, was raised 50 per cent. above the average. So far was this from the truth, that the increase amounted to just 9 per cent. above the average of the corresponding quarters of the last seven years, while two of those years, 1844 and 1846, were as high as the present. The following figures confirm the truth of the above statement:—

Table shewing the Mortality in the City and Borough of Bath, for the Quarter ending 30th September, during the last Seven Years.

1842	277	} Average for the 7 years, 268
1843	280	
1844	290	
1845	264	
1846	291	
1847	238	
1848	239	

The deaths during the last quarter were 291, that is 23 above the average or 9 per cent., nearly. It is further to be observed that the two last years have been singularly healthy, which circumstance has had the effect of reducing materially the average of the seven years, thus giving an appearance of increase to the present year greater than the facts warrant.

The following is an analysis of the reports on the under-mentioned points:—1st, Duration; 2nd, Exacerbations; 3rd, Diarrhoea; 4th, Hæmorrhage; 5th, Eruption; 6th, Contagion.

1st. *Duration*.—From 14 to 28 days will include all the reports.

2nd. *Exacerbations*.—Thirteen observers, reporting an aggregate of 420 cases, speak of exacerbations chiefly in the evening as constant. Three observers, reporting a total of 27 cases, did not detect any exacerbations. The remainder make no report on the subject.

3rd. *Diarrhoea*.—On this point my information is scanty, as I neglected to include it among my queries. The only four observers who mention diarrhoea, state it to have been very constant.

4th. *Hæmorrhage*.—Five observers mention hæmorrhage from the bowels and nose, death is traced to the former cause in 6 cases; by one blood and mucus in the evacuations is stated to have occurred in 6 out of 14 cases, among the 6 there was 1 death. In the Registrar's returns, hæmorrhage from the bowels is mentioned as secondary in 3 cases. These facts as far as they go support the generally received opinion as to the serious indication to be drawn from the occurrence of hæmorrhage from the bowels in the course of typhoid fever. It is probable that hæmorrhage from

the bowels would occur in many cases where it would not be noted; this is especially likely in the dwellings of the poor, where it is always difficult to get the excretions kept, as the family all live probably in one room, and are properly desirous of the speedy removal of all offensive matters.

5th. *Eruption*.—The general answer under this head is, that there was no eruption. Four observers mention an eruption; two do not specify any period; the third, at the commencement of convalescence in 2 cases; and the fourth, from the twelfth to the fourteenth day in 5 cases. This evidence, as far as it goes accords well enough with the typhoid eruption, but does not answer in any particular with the eruption of typhus. Still the examination of the skin in all cases of fever is not sufficiently frequent and general to justify any very safe conclusions. There were only 3 cases among those which came under my own observation where the eruption was such as could be safely considered as that peculiar to typhoid fever.

6th. *Contagion*.—Five observers have adduced evidence in favour of the contagious nature of the fever, the remainder state that they have not met with any evidence in favour of that view. Two of the instances adduced are of the following kind:—The disease broke out rather severely in a boy's school; two of those attacked returned to their families, who reside in Bath. Shortly after their return, other members of their respective families were attacked, although there were no cases of the fever in either neighbourhood previous to the return of the boys. The other three instances were of the following kind:—Certain members of a family being seized with the fever, a fortnight or three weeks afterwards other members, who were in close attendance on those first attacked, became ill and passed through the same disease. One case of this kind came under my own notice. On the 21st of September I saw a lady who had been ill for about a week, the symptoms were very characteristic, the headache more than usually intense; ten days after I first saw her, her sister, who had been in close attendance upon her, became ill, and went through the usual fever, though more lightly than ordinary. These facts furnish strong evidence in favour of the disease being to a certain extent contagious, and in this particular likewise accords with the almost universal opinion of the best authorities on the disease, although the typhoid fever does not appear to possess nearly the same power of extending itself by means of contagion as the typhus does.

I will now endeavour to give a description of the disease, with an account of the *post-mortem* appearances in three fatal cases; and, in the first place, I will describe the mode of attack in the first three cases in my hospital note-book.

CASE I.

C. W., a housemaid, aged 24, admitted into the hospital on the 1st of October. Had suffered for a week previous to the 22nd September from languor and debility, some pain of head and limbs, occasional

shivering, sleepless nights, and loss of appetite. On the 22nd September she was seized with intense headache and vomiting, great thirst, and a dry hot skin. From this time until her admission she was under the care of the medical attendant of the family. On admission she had a flushed countenance; a dry hot skin; the pulse from 112 to 120; severe headache; eyes suffused; tongue red and dry at its edges and tip, and a moist whitish streak down the centre; occasional vomiting of greenish-looking matter; bowels relaxed; some tenderness of abdomen on pressure; distinct gurgoulement in the right iliac region. She always became worse during the evening, and suffered from delirium at night. The progress of this case was slow, and the result for some time doubtful. She had a remarkably tedious convalescence. Was dismissed on the 5th of November.

CASE II.

H. P., maid of all work, aged 19, admitted into the hospital October 2nd. Was taken ill on no particular day, but had been ailing for a week previous to admission, at which time she was suffering from headache, sickness, and relaxed bowels; not much heat of skin; pulse not very rapid; tongue covered with a yellowish fur, but moist. This was not a severe case, and made a rapid recovery. She was dismissed on the 26th of October.

CASE III.

E. C., maid of all work, aged 21, admitted into the hospital October 2nd. Had been far from well for a week previous to the 22nd of September, on which day she was seized with sickness, pain and giddiness of the head, heat of skin, and great thirst. The bowels at this time constipated, felt tolerably well during the day, but much worse in the evening and during the night. On admission she presented a dusky flushed countenance; a dry red tongue; general abdominal tenderness, diarrhoea, occasional vomiting, iliac gurgling; some pain of head, worse towards evening; delirium during the night, much difficulty to keep her in bed; pulse from 120 to 130. This case was an exceedingly tedious one, and did not leave the hospital until the 11th of December.

These cases may suffice to illustrate the mode of attack, and the character of the symptoms. They show a strong family likeness. In the leading features of every case that came under my observation, there was complete similarity in kind—differences, of course, in degree. In all there was diarrhoea; in all nausea; in a majority there was vomiting; in all there were evening exacerbations, frequently delirium during the night; in all there was gurgling in the right iliac region producible by pressure; in all the tongue presented marked deviations from health; in a large majority it was red and dry, or red and moist, with patches of creamy exudation. When there was no abnormal redness, the most frequent condition was a covering of thick yellowish fur; when the tongue presented this latter character,

there was more disturbance of the stomach and less of the bowels, than in the red variety.

I now have to describe the morbid appearances in three fatal cases; two of these occurred under my own care in the hospital, the third in the practice of Mr. Stockwell, jun., who kindly asked me to be present at the examination.

CASE I.

Ann Hart, aged 28, was admitted into the hospital on the 12th of October, having been ill about three weeks. I was unable to obtain any previous history of the case, as she was delirious at the time of admission, and continued so until her death, which took place on the 20th, eight days after admission. She had diarrhoea and frequent vomiting; the upper part of the body was covered with sudamina; the pulse was very frequent. She died from sinking of the circulation in part, and also from cerebral disturbance. The body was examined twelve hours after death. The brain, as regards its membranes, and the amount of fluid in the ventricles, presented nothing abnormal, but to the right of the Pons Varolii there was a tumour, about the size of a nutmeg, composed of pure cholesterine; the little masses which formed the tumour were bound together by a small quantity of loose cellular tissue.* The lower three feet of the ilium were removed, slit open, and examined; the whole of the elliptical patches in the extent of bowel mentioned were more or less affected; those near the ilio-cæcal valve were in an advanced stage of ulceration; in some nothing of the thickness of the bowel remained, except the peritoneal covering; further up the patches were thickened with only superficial ulceration, while still higher up they were only raised slightly above their natural level. I do not occupy your time by detailing the physical appearances presented by the diseased patches, as you are all, no doubt, familiar with them. The most perfect verbal description that I am acquainted with of the various stages of disorganization presented by the patches of Peyer, and the solitary glands in typhoid fever, is that by Rokitsanski, (the Sydenham edition,) at p. 68, *et sequent*, Vol. 2.

CASE II.

I examined, with Mr. Stockwell, the body of a woman 38 years of age. She had been ill about three weeks before she was seen by Mr. Stockwell. The head seemed to be the chief seat of danger, and death took place apparently from cerebral disturbance. It did not appear that she had suffered from diarrhoea. On dissection nothing abnormal was detected in the brain. The ilium presented, to a remarkable extent, the changes described in the former case; there was not a stage wanting towards a perfect illustration of the typhoid process, from simple congestion of the patches to the deep excavated ulcer. In the slighter cases the diseased patches are for the most part opposite to the insertion of the mesentery, but here none seemed to have escaped as you approached the valve. It is worthy

* The liver in this case was healthy.

of remark, that there was no history of diarrhoea in this case; this, however, must not be taken for more than it is worth, as patients themselves and their friends, unless closely interrogated, put a different interpretation on what constitutes diarrhoea from what we do; they judge chiefly according to number, while we estimate by consistence.

CASE III.

William Griffiths, aged 55, was admitted into the hospital on the 14th of December, and died on the 16th. Of his previous history I am unable to give any account; he lived just long enough to satisfy me as to the nature of his disease. On dissection the glandular apparatus of the ilium presented changes similar to those already described, only not to the same extent. The liver in this man presented a very fine specimen of cirrhosis. The brain was not examined.

It might be expected that in a paper which purports to describe the progress of a local epidemic, something should be said on the subject of causes, but I have not one fact to advance in this matter. The fashion of the present day would justify a diligent search after a foul drain, or a cesspool, and as soon as such an object was detected in a vicinity where some cases of the disease had occurred, it would at once be pointed at triumphantly as the efficient cause. Such a doctrine may be justifiable in order to induce local boards to remove nuisances, and so effect improvements, but is simply absurd when offered as a scientific solution of the question at issue. On the present occasion I have taken some pains to discover whether any condition common to all the localities where the fever prevailed could be detected, but no such condition presented itself. It occurred in some of the badly drained and ventilated parts of the city, but not in all of them; and it occurred in some of the best drained and ventilated, but not in all of them. The first outbreak was spread over a circumscribed but still considerable portion of the city; subjects were selected at the same time from among the wealthy and the poor, as if on purpose to baffle the ingenuity of theorists. As far as our knowledge extends at present, the essential cause of all epidemic disease is a mystery. The hypothesis which supposes epidemic disease to be produced by minute living organisms fulfils the requirements of the case better, perhaps, than any other, and it is probable that the ultimate discovery of such organisms as the true cause of epidemics would surprise no one who has paid much attention to the subject. The recent researches which have been carried on in this city (Bristol) with reference to cholera, while they reflect the highest credit on the talent, ingenuity, and patience of the observers, have also given a new impulse to the organic hypothesis. The fever of which we are speaking replaced the cholera in Bath. On the idea of organic life as the cause of the cholera, the probability is not remote that some further development of the same organisms, or the starting into existence of a new species or variety, may

have been the cause of the fever, and it is stated by Dr. Jenner that he has discovered bodies similar to, if not identical with, those found in cholera dejections, in the stools of patients affected with typhoid fever. I will not dwell on this subject, as it is by patient and long continued observation alone that truth is to be arrived at, and fortunately the means of observation no longer exist in this country in as far as cholera is concerned. This much I may observe, that I do not think any theory will be found to suit the requirements of fever, which does not admit the primary entrance of the specific poison into the blood.

There was a time in the history of typhoid fever when it formed the battle ground on which, what may be termed the essentialist and the non-essentialist, encountered one another. The one maintaining that the succession of symptoms, to which we give the name of fever, were nothing more than the effects produced on the system by the local lesion, just as any other local injury or disease is accompanied, in proportion to its extent, and the importance of the organs involved, by symptomatic fever. The other, that the symptoms of the disease together with the local lesion, were to be attributed to one and the same cause, and this, a cause acting on every function of the system. According to this view the abdominal lesion is not primary but secondary—a specific inflammation, dependent on a specific cause—and it possesses the common and distinctive character of such inflammation in an eminent degree, namely, that the process is confined to one particular kind of structure, that it does not spread from a given point by continuity of tissue, but fixes on a number of isolated points, characterized by identity of structure and function, leaving the intermediate spaces healthy.

I now have to offer a few remarks on the treatment of this fever, and this I would desire to do with becoming diffidence in the presence of so many practical men of large experience; at the same time, however, the opinions which I shall advance have been arrived at with sufficient observation and care to justify my offering them with some confidence.

I believe that the celebrated aphorism of Cullen as regards the treatment of our ordinary typhus, contains the germ of all that is to be said on the subject, namely, that the proper object is “to obviate the tendency to death,” and the wisdom of the practitioner lies in his ability to detect, early and clearly, the approach of special dangers, and so to marshal his forces as best to avert them; acting under the conviction that there is no such thing as *curing* a fever, but that if he can keep his patient alive, and free from serious local lesion for a sufficient time, the fever will wear itself out. This view, I think, requires some modification in the treatment of typhoid fever, to a certain extent it still holds, but modified by the ascertained fact that you have a slow specific inflammation going on in a particular portion of the intestinal tract; the remedies for inflammation ought not then to be neglected, but they ought to be had recourse to with a distinct understanding,—that, although you have an

inflammation to deal with, still that inflammation is specific, the result of a particular condition of the system at large, and,—that the local affection can only be expected to yield, when the cause on which it is dependent shall have ceased to act; so that nothing more is to be attempted than simply to moderate by all means at your disposal the extent of the local mischief, leaving the case to time and the known tendency of all specific febrile poisons to self exhaustion.

I apprehend that few will be inclined to deny that the above are sound indications on which to proceed in the treatment of typhoid fever. As to the best means of carrying them out, there is room for much difference of opinion, but it is always well to have distinct general notions as to the proper indications in the treatment of any disease.

Of the efficacy of general bleeding in the treatment of this disease, I have no personal experience, it is highly spoken of by various authorities—as Chomel, Louis, Andral, (not forgetting the absurd extent to which it was carried by Bonillaud), also by several American writers. Of the advantages of local bleeding by means of leeches early in the disease, I entertain a very high opinion; from eight to twelve leeches are applied over the right iliac region each day for three or four days as early in the attack as the diagnosis becomes clear, during this period frequently changed hot cataplasms are kept constantly applied, afterwards the skin over the same region is kept in a state of constant irritation, by means of sinapisms applied every night or every other night. If the patient does not come under treatment until the middle of the second week, the leeches are generally omitted, and the mustard poultices at once commenced with. The patient's body is frequently, generally every evening, sponged over with tepid water, that is to say, the upper part of the body and the abdomen. If the headache is more than usually severe, half a dozen leeches are applied to the temples, followed by cold applications to the head, or it may be, warm, which are sometimes more grateful to the feelings of the patient, and I believe always preferable, unless the cold can be kept continuous. When there is diarrhoea—indeed I may say as a general rule—the patient has three grains of grey, and five of Dover's powder, night and morning, with a tea-spoonful of castor oil every third or fourth morning. If there is vomiting, half a grain of opium is substituted for the Dover's powder; if it still continues, a mustard poultice or a blister is applied to the epigastrium, and a starch and laudanum injection administered at night. The patient is encouraged to drink freely of thin gruel or barley water. Salines, either as medicine or drink, are altogether avoided. This constitutes the entire treatment of ordinary cases. Great care is observed in allowing a more liberal diet, especially as regards solid food.

When there is *active* delirium, antimony and opium, on Graves' plan, is had recourse to, generally with advantage: the form I use is one grain of acetate of morphia, and half a grain of tartar emetic, in three ounces of camphor mixture, a third part to be taken at bed-

time, and repeated every two hours until the whole is taken, or sleep produced. The head is sometimes blistered, always in preference to the neck. Should there be any tendency to suppression of urine, ten grains of nitre are given in linseed tea every hour for three doses, and repeated again after an interval of a few hours in the same way.

If sinking of the circulation is threatened, wine and beef tea are freely administered, alternately at short intervals, occasionally carbonate of ammonia in camphor mixture.

P.S. Since the above communication was read I have met with a paper by Mr. Todd, of Evenwood, published in the *Lancet* of 22nd December (being one of a series of interesting papers on continued fever, in process of publication in that journal,) in which he discusses the import of the intestinal lesion, and arrives at the conclusion that the typhoid fever is essentially the same disease as the typhus. Now, as this conclusion is exactly the opposite of that at which I have arrived, from no small amount of observation and very careful study of the subject, I deem it right to point out, with all courtesy towards Mr. Todd, certain errors into which he has fallen in stating the case as regards the two diseases.

Mr. Todd says:—"MM. Broussais, Chomel, Louis, Brittonneau, and Bonillaud, belong to that section of the French school, who can perceive nothing in typhus fever, but inflammation and ulceration of the gastro-enteric mucous membrane, and who assert that certain changes in the glands, producing ulceration of the mucous membrane of the bowels, commence with the disease, are inseparable from its existence, and that all the changes are consecutive to this." This passage does not by any means represent the opinions of the pathologists above-mentioned.

It is true that Broussais considered typhoid fever to be nothing but a gastro-enterite, while Brittonneau confined the disease to the small intestine, under the expressive term "*Dothenenterite*." Bonillaud, again, discarded from his notions, both stomach and bowels, and considered the affection as an inflammation of the lining membrane of the heart and great vessels; while Chomel and Louis consider typhoid fever to be a specific malady, having the follicular lesion as its *anatomical character* not as its *pathological cause*—two very different things. No writer has done so much towards the downfall of the Broussais school as Louis has.

I had marked other passages for comment, but what has been written may perhaps induce Mr. Todd to refer again to the works of the authors he has quoted. There are other writers of authority on fever in this country who labour under very mistaken notions concerning the opinions of Louis and others on the subject of typhoid fever.

I believe that if those who have much opportunity of treating fever will take the trouble to observe closely the symptoms during life, and lose no occasion of instituting *post-mortem* examinations, they will see reason enough for separating typhoid fever from typhus.

I consider the diagnosis of typhoid fever to be one of the most easy and best established in the whole range of internal maladies. I should not hesitate to pronounce as absolutely in a given case on the existence of the follicular lesion from the symptoms presented during life, as I would on the presence of lymph between the layers of the pericardium if I heard the to and fro sound over the region of the heart.

CASE OF

UNEXPECTED RECOVERY FROM A SEVERE
PULMONARY AFFECTION,

SIMULATING TUBERCULAR PHTHISIS.

By CHAS. SMERDON, Esq., CLIFTON.

Read before the Bath and Bristol Branch of the Association, Dec. 20th, 1849.

ALTHOUGH it was the opinion of Laennec that pulmonary phthisis, like other organic diseases of vital organs, was not absolutely incurable, still the occurrence of such an event, is so very rare, that a large majority of our profession—those even who have had the best opportunities of noting the progress and termination of this most insidious disease, are decidedly impressed with the belief, that hereditary tubercular consumption is never recovered from. This sweeping conclusion, although unhappily too true in general, is not, I believe, devoid of well-marked exceptions. How far the following case may be adduced as a confirmation of that opinion, I will leave to the decision of the Association.

CASE.—James Myers, sailor, aged 32, of slender make, about five feet seven inches in height, fair complexion, and of temperate habits. His grandfather and grandmother died at very advanced ages, and his father and mother are now living, and quite healthy. The year before his present illness he had yellow fever, contracted in one of the West India Islands, out of which he slowly though fully recovered. Sometime in May of the present year he was at Porto Rico, where, during the loading of the vessels for the homeward bound voyage, being then much exposed to the heat of the sun, he was seized with a sudden rigor, succeeded by the usual symptoms of fever. For some days previously to this attack, he had had pain of the chest, especially of the right side, but no cough, accompanied by unusual lassitude. After the attack of fever, these symptoms were greatly increased, so that it was clear some general derangement or inflammation of an internal organ had set in. A few days after the commencement of the homeward bound voyage, he became too ill to be about. He now had cough, embarrassment in breathing, rigors succeeded by night perspirations, copious expectoration, and rapid emaciation. In this state he arrived in Bristol, about the middle of July, after a homeward bound voyage of six weeks, when I first saw him. I was struck most forcibly by his sallow, bloodless, and

squalid appearance. He had an incessant cough, with copious expectoration of viscid sputa. His pulse was quick and small; breathing accelerated; pain over the whole chest but more especially of the right side, extending downwards to the right hypochondrium; tongue morbidly red and dry; percussion-sound dull throughout, respiratory murmur very indistinct, and on the right side especially, rhonchi of a crepitating character were clearly marked, but I could not make out any abnormal sounds indicative of a cavity either now or on a subsequent examination. Altogether, I never met with a more unpromising case. He was ordered some quieting pills of henbane, morphia, and ipecacuanha three times a day; a blister to the chest, and to take a tablespoonful of cod-liver oil thrice daily. During the following three weeks he steadily pursued this plan, without any appreciable benefit to the lung disease, although his general health had evidently improved. He was desired to continue the oil and the quieting pills, for another period of four weeks, during which time I saw him occasionally, but could not mark any improvement; on the contrary, he had become more emaciated, his breathing more hurried and oppressed, and his strength had decreased. Up to this time, since his return to England, he has had no night perspirations, and his sleep, when not disturbed by the cough, has been tolerably tranquil. On the 6th of September, during a violent fit of coughing, he was seized suddenly with hæmoptysis to the extent of about eight ounces, evidently of an arterial character. In the hurry of the moment a neighbouring surgeon was sent for, who bled him to eight ounces, and gave him pills of two grains of superacetate of lead and two grains of Dover's powders *ter die*. A blister also was applied to his chest. The large flow of blood was arrested by the blood-letting, but it reduced him to a very debilitated state, so that he could no longer rise from his bed; but, notwithstanding, large pieces of dark coagulated blood still continued to be expectorated each time of coughing, mixed with muco-purulent sputa, and this in such large quantities that I thought it impossible he could survive many days. About a week after the first attack of hæmoptysis, he had another, more moderate in quantity certainly, but equally as alarming as the first, taking into account the previously exhausted state of the patient. Notwithstanding, he was again bled, and another blister applied. I saw him a short time afterwards, and being convinced that further heroic means of this kind were inadmissible, I determined to arrest, if possible, the continuance of the blood spitting, by lead and opium, in large doses; with this view I gave him five grains of the superacetate of lead and one of the extract of opium, every three hours, and as maniacal symptoms were beginning to show themselves, I ordered his head to be shaved and kept wet with cold water. For three successive days and nights he took the lead pills. It may be right here to premise, that up to this period no abatement had taken place in the quantity or quality of the expectoration, nor of the cough. He was now seized suddenly with crampy pains at the pit of the stomach, extending over the upper portion of the abdomen; his agonies