ART. VII.—*Further Observations on Typhus and Typhoid Fevers, as seen in Dublin; especially the united form they assumed during the first half of the year 1862.* By HENRY KENNEDY, A.B., M.B., one of the Physicians in Ordinary to Sir Patrick Dun's Hospital.

IN May, 1860, a paper of mine was read at the Royal Med.-Chirurgical Society of London, "On Typhus and Typhoid Fevers, as seen in Dublin." Its main object was to show, that whilst these two types of fever could, in the great majority of instances, be distinguished from each other, it was yet essential that they should be considered as the result of a common poison; and that no other view of the matter either would or could meet all the difficulties which surrounded the question. Nothing has occurred since to alter the views then advanced. But I have had some additional experience, both in hospital and from books; and, as the subject is by many still considered unsettled, have thought well of bringing it once more under the notice of the profession. Some, for whose opinion I have a high respect, consider the questions involved of no moment, or at best of mere scientific curiosity; and have even gone so far as to state, that there is no occasion for a difference of treatment in the types of fever known as typhus and typhoid. I believe this to be a grave error; and that no one who has to do with fever, on the large scale, could possibly give his assent to it, as he knows that the diagnosis, prognosis, and treatment, are all essentially modified, according to the type of fever with which he has to deal. The recent deaths too of more than one illustrious person, from fever, have not tended to lessen the importance of every point connected with the subject.

Before entering on the more immediate object of this paper, I think it necessary to notice a line of argument which has been followed by many, especially in London. All are aware that Dr. Jenner, of that City, has published an elaborate monograph *On the Identity or Non-identity of Typhoid and Typhus Fevers*. In it he has avowedly omitted all notice of the labours of others in the same field; and has come to the conclusion, that the two fevers are essentially different, and the result of different poisons. Now in a wide spread disease like fever I can scarcely conceive a mode more likely to lead to a wrong conclusion. Had the author put forward his views as representing the two types of fever as they came under his notice in London, I could have understood him;

and a very valuable contribution it would have been. But to seek to establish that they are essentially two diseases, both as to causes and symptoms, is going farther than any present experience will justify. Other observers, equally competent with Dr. Jenner, have seen fever, and, it may be observed in passing, on a much larger scale; and—what might have been easily anticipated—have come to an opposite conclusion. Yet, at the meeting in London two years since, not one member of the society expressed even a doubt on the matter. Their views were limited to London, and nothing outside it could alter them. If this be the right way of dealing with such a question, I must indeed be much mistaken. It is true that since then more than one gentleman seems, from cases which were brought before the London Pathological Society,^a to have had some misgivings on the subject; and, if I recollect right, Dr. Copland, on one occasion, spoke of the necessity of caution in coming to too strict a conclusion about the types of fever. Still the fact remains, that the London physicians seem to have ignored anything but what has occurred in their own city.

But another and more serious objection exists against the monograph of Dr. Jenner; or taking it as the foundation of a theory on this much debated question. The conclusions at which he has arrived are avowedly based on 64 cases only; and, as these were all fatal, it follows that his deductions were founded on a minority, and that a very small one. For it cannot be supposed for an instant that the fatal cases formed the majority. Can I be wrong, then, in asserting that the natural history of no disease—and this is really the question at issue—is to be learned from such premises? A very good, and, no question of it, a very faithful record the monograph is, as far as it goes; specially on the morbid anatomy of the types of fever of which it treats. But to suppose that it either can, or ought to teach us their natural history, is flying in the face of common sense. No one, I think, will for a moment put this monograph

^a One instance given in the *Lancet* of 19th October, 1861, may be alluded to. Dr. Wilks exhibited a specimen of ulcers of the ileum in a woman of 70. He proceeds:—"Thus, in the present instance, the disease would rather have been styled typhus, had not the truth been discovered after death. The woman was nearly 70, in an extreme state of prostration, and delirious; no diarrhea, and no rash of any kind. All the circumstances existed which should have determined the typhus, rather than the typhoid disease, and yet the latter existed with all its characteristics; a good case," he continues, "in proof of the specific nature of the disease." What disease, I would ask, or rather, which disease? for it is left quite uncertain; as, indeed, the details would leave any reader.

in comparison with that of Huss, who gives us the result of his observations on upwards of 3,000 cases. No, no. The natural history of any disease is to be learned from the living as well as the dead; and, inasmuch as the living constitute the great majority, we prefer to have it taken from them. In Flint's very elaborate work the subject is treated in a different mode; for he avows that he left out all the cases of the type of which he was not quite certain; and took his data from the rest. But this too, is a questionable proceeding; and we must infer that his conclusions are only an approximation to the truth.

What then are the results at which Huss has arrived? His observations being spread over 20 years, applying to different epidemics, and his colleagues all agreeing with him. Why, that the two types of fever, typhus and typhoid, are to be considered as arising from a common cause. At page 10 I find the following passage:—"A number of intermediate forms (that is of fever), were of frequent occurrence, making it utterly impossible to determine the true nature of the case, whether petechial or abdominal, as there were symptoms of both. Often such symptoms were observed as seemed to announce an affection of the intestinal glands; but the *post mortem* examination did not discover any; in other cases these alterations were found, and the symptoms had indicated a petechial form." One of the epidemics he describes, though of but limited extent, seems to me specially worthy of note. It broke out amongst 250 soldiers, all between 20 and 40 years of age, and placed under exactly the like hygienic conditions; and yet "the disease assumed the distinct form of typhus in one part of the cases, of typhoid in another, and a third took an intermediate form."—64 cases occurred. Farther on also he states, that in one house 17 cases occurred within a fortnight; of which 10 were typhus, and seven typhoid.

If these be not facts enough to satisfy most minds, I know not what could be considered such; nor can any observations as to contagion or the locality whence the fever comes, either in London or elsewhere, contravene them.

Another point noticed by Huss—and it is common with us in Dublin—is the change in type of the disease. Thus, at the commencement of the epidemics he describes typhus as the prevailing form; and then later on the fever became typhoid. It is true he did not observe the contrary, but the fact in itself is worthy of notice, as it seems to myself to be much easier of explanation on the hypothesis of there being but one poison, rather than two. And

this leads me to speak of the analogical argument, as it may be called, and which has not escaped Huss, who maintains that scarlatina presents just as striking differences in itself—and none, I think, can gainsay him—as are ever seen between typhus and typhoid types of fever; and I must say it devolves on those who differ from him to answer the argument as they best can. To myself it seems unanswerable.

When I last wrote on this topic I was not aware of a fact which has since come to my knowledge, viz., that the kind of ulceration met in typhoid fever is not confined to that disease alone, but is occasionally seen in other affections. Thus, Flint speaks of a case of scarlatina in which he found ulcers in the ileum. So, likewise, Huss met the same; and Dr. Anderson, of Glasgow, in his Lectures, published in 1861, gives two instances of a similar kind; one being a case of confluent small-pox, and the other one of scarlatina.^a Now, though there are but five such cases in all, they yet appear to me to open up a new question on the subject. Is the intestinal lesion common to all the class of fevers, the exanthemata amongst the rest? Had it been looked for, would it have been more frequently found? The answers to these question cannot, at present, be given, but must be looked for in future investigations on the subject. I, myself, have directed attention to the great similarity between the intestinal ulcers which sometimes are found in phthisis, and those which exist in typhoid fever; a similarity so striking that the question has often forced itself on my mind—can it be possible the ulcers of this fever are mainly due to the existence of the strumous constitution? Every one knows that they vary both in extent and degree; in other words, they do not necessarily bear a relation with the progress of the fever. The latter may prove fatal, and yet the amount of intestinal lesion be very slight, and *vice versâ*; and, far-fetched as the idea may be, in connecting the ulcers of typhoid fever with the strumous diathesis, there are yet some points may be adduced in its support. Thus, the class of patients in whom this type of fever usually occurs are frequently marked by having a very fine skin, and great susceptibility of constitution. I have seen them also having scars on the neck; and when phthisis chanced to supervene it was far more frequently after this type of fever. But though these are striking facts I would not wish to do more at present than start the idea, of the possible connexion of the intestinal lesion of typhoid fever with the strumous diathesis.

^a Louis also met a similar case.

And now I would speak of the additional experience two year's attendance at Sir Patrick Dun's Hospital has afforded; and believe no better plan can be adopted than by giving the shortest possible details of the more striking cases which occurred. In doing so a large number of cases of a milder character are purposely omitted; not because they arose from a different poison, which it is the fashion of the day to maintain; for they often came from the same room, and at the same time; but because their progress threw no light, one way or another, on the question under discussion. This much, however, is certain—that even febricula exhibits its full share of varieties; and I have seen fever with spots, though not within the last two years, which could scarcely be called other than febricula, it was so mild and required so little care. As to making the cases into a series of statistics, I have long given up the idea. In the present question, as to the identity or non-identity of the typhus and typhoid poisons, I believe they have led, and can only lead, to erroneous results. Had they been confined to points about which there could be no doubt, as the difference of the sexes, or age of patients attacked, advantage would have been gained. But when I find the following conclusions—founded on statistics—drawn, I cannot but question their value. I quote now from Flint's work, published in 1852, page 237:—"General aspect.—Capillary congestion of the face, extending frequently to the extremities, causing a dull red colour, present in all cases of typhus, and in a large proportion of the cases of typhoid. Nervous system.—Passive delirium, manifested by incoherent talking, attempting to get out of bed, present more constantly in typhus; but very active persistent delirium, requiring forcible restraint, characteristic of typhoid. Digestive system.—Appetite, or relish of food, oftener present in typhus. A reddened tongue, occasionally observed in typhoid, and not in typhus.—Diarrhea, present in one half of the cases of typhoid, and in one third of the cases of typhus; in the latter type always mild or slight, but in the former sometimes prominent as a symptom.—Hemorrhage from the bowels characteristic of typhoid.—Epistaxis extremely rare in typhus, occurring frequently in typhoid.—Tympanites present in about an equal ratio in both types; but in typhus almost invariably slight, while in typhoid it is often prominent."

These extracts might easily have been multiplied. To myself they appear to be labour thrown away, being distinctions without a difference; nor do I think they could be available at the bed-side;

some of them too are directly opposed to my own experience. I might instance "active persistent delirium" as being characteristic of typhoid. If there be one general point more than another to separate the two types, I would say it had reference to the brain; and to the greater freedom of this organ in typhoid, when compared with cases of typhus fever. Again, when the author speaks of "appetite, or relish for food, oftener present in typhus." What can be inferred from it? Is it that appetite can be put down as in any way a mark of distinction between the two types of fever? Surely not; the natural history of fevers entirely forbids such an idea. Appetite, as far as I know, is not a symptom of any kind of fever: the very contrary is the rule; and, when it does occur, it is so exceptional that it is not worth a moment's consideration as bearing on the question.

But further: The author states that "diarrhea is present in one-half of the cases of typhoid; and in one third of the cases of typhus; in the latter type always mild or slight, but in the former sometimes prominent as a symptom."—The words are quoted as given in Flint's Work; because the statement is really very startling. I do not for a moment question its truthfulness; but it must strike every one as very strange, that in America only one-half the cases of the typhoid type had diarrhea, and this only sometimes a prominent symptom; whilst in typhus the proportion, presenting the same symptom, was one-third. In Great Britain and Ireland, and I believe on the Continent too, cases of typhoid fever with constipation, are far in a way the exception to the general rule: and on the other hand, typhus attended by diarrhea, in the proportion of one-third, must be considered equally rare. That it does, however, occur, at times in Dublin, I know, of which I shall have to say more again.

Hemorrhage is another symptom, about which there would seem to be a very marked contrast in different places. In Paris, Stockholm, and America, it is described as very rare. In London it was met with in a third of 23 cases of typhoid, and not at all in 43 cases of the typhus type. Hence, Dr. Jenner has come to the conclusion, that intestinal hemorrhage is characteristic of typhoid, and not of typhus. That this is erroneous as regards Dublin, I have no doubt. In another place I have put on record, some 30 cases of well marked typhus—some of them examined after death—in which there had been extensive hemorrhage; and yet not a trace of ulceration was found: and when the patient survived the

bleeding a week, it having ceased, I was unable to say from what part of the canal the blood had come. It must, in fact, have been an exudation. As to epistaxis being a sign of typhoid and not of typhus, I cannot give it credence; and for the simple reason that, for years, I have been noting cases of typhus in which it occurred. I am quite aware that it exists, at times, in typhoid. All I would convey is, that it is common to the two types: and prevails much more at some periods than at others. Thus, with us in Summer, and with the temperature high, it is sure to prevail; no matter what the type of fever may be.

But statistics have been brought to bear on points which I believe have nothing to say to the natural history of fevers. Thus, because erysipelas occurred in some cases, and in typhoid more than typhus, it is put down as a diagnostic mark of the two types; and similar remarks may be applied to pneumonia.* To my mind it appears a much more rational method to look on them as mere complications; prevailing at one period and not at another; for whilst we have fever of the different types always amongst us, months and months frequently elapse without either pneumonia or erysipelas complicating them. If these be not good reasons for setting them aside altogether—as not bearing on the question under discussion—I am at a loss to know what is.

It would be easy to say much more on statistics, in relation with this subject; but enough probably has been advanced to show the mistakes to which they may lead; as having reference to points—I will not call them symptoms—which are not, and cannot be accurately defined; or which must be placed under the head of complications; and therefore, not belonging to the natural history of fevers. These considerations, at any rate, have induced me to deal differently, and, as I believe, more correctly with the question; and I now proceed to give the briefest sketch of all the serious cases of fever which have come under my notice within the last two years. They are given in the order in which they occurred.

CASE I.—Miss M., aged 16, pay patient, admitted into Dun's Hospital, in June, 1860. Ill with fever of typhoid type 17 days.

* Louis speaks of erysipelas as occurring with typhoid fever; but he takes special care to tell us it occurred during one year only, and attributes it to what we would call an epidemic constitution. And in Bartlett's Work, p. 66, I find the following:—"Neither the symptoms nor the lesions go to show that the lungs play any very important part in the numerous and complicated phenomena of typhoid fever."

There were diarrhea, slight tympany, pain on pressure, and the usual discharges. But there were no spots till late in the disease, when two of very doubtful character appeared; one on the chest, and the second on the abdomen. Though her eyes were suffused, she had no head symptoms whatever. The tongue, at first moist, then became dry; sordes formed in large quantities, and finally there was oozing of blood from the gums. This organ, in truth, went through all the stages which are more usually seen in typhus fever. The abdominal symptoms did not yield till specific treatment was adopted; of which more again. Later still there was distinct crisis by sweat.

CASE II.—Walshe, aged 28, married, of sanguineous temperament, and very fine skin, was admitted in June, 1860; ill of fever 14 days; typhoid type. She had the usual abdominal symptoms, except that there was no pain on pressure. The eyes were heavy and the mind slow; but there was no raving. The tongue, all through kept moist; at the same time that it was densely coated with a drab fur. The discharges at first yellowish, became darker as the disease went on to recovery. On the 20th day three spots were visible; one on the chest, and two on the abdomen; the latter being very much larger than usual, and not affected in any way by pressure. They remained more than a week; during which period two new spots came out on the left side of the abdomen; not so large as the other two. Though diarrhea had ceased, and fever in a great degree with it, still a marked crisis occurred by sweat, which lasted several hours.

CASE III.—A boy of 16, of a strumous aspect, and fine skin, was admitted in July, 1860; after being ill several days at home; but the number uncertain. He had all the symptoms of typhoid fever in a very aggravated form; attended by raving and bawling at night; and this went on even when the abdominal signs had materially subsided. The rash was much more extensive than usual, and might be described as measly; being darker on the trunk and lighter on the arms. After a very marked improvement this case relapsed; all the symptoms, including diarrhea and raving, got worse and worse. The boy was removed from hospital two days before death. It is worthy of note, that during the apparent improvement his pulse never came down.

CASE IV.—Miss S., pay patient, aged 17, of sanguineous

temperament, and the finest skin; admitted, July, 1860; labouring under fever which she had attributed to a severe wetting. Except that she had diarrhea, with the discharges of a light yellow colour, and then becoming darker before they ceased, this case presented no other symptoms of the typhoid type of fever. No spots, nor tympany, nor pain on pressure. The fever, however, ran on to 21 days. I must leave it to others to give it a name.

CASE V.—Coates, aged 48, admitted, April, 1861; ill eight days of fever, and densely spotted. The spots were not only visible on the trunk, where many were of the most irregular shape, and as if formed from the rupture of a blood vessel; but there were several on the face, and here they were of a much brighter hue than the others. It is enough to say of this case, that all the symptoms were of the gravest character; hands and feet livid; artery at wrist quite distinct to the finger, and yet the pulse barely perceptible; cerebral respiration with stupor; rolling of tongue in mouth, &c., &c. At first there was a tendency to diarrhea, and all through marked subsultus. This man died the 13th day of his illness.

CASE VI.—Coates; the wife of the last patient, took ill a few days later than her husband. She had all the symptoms of the same type of fever; but in an infinitely less severe form. The spots might be described as a mottling, and could only be seen in a strong light. Though the eyes were very much injected there was scarcely any stupor; and her sleep was barely disturbed.

CASE VII.—Coates, aged 22, daughter of last patient, was ill same time, and admitted ninth day of fever. She was spotted to a degree rarely seen; and in this instance the spots were, at first, much darker on the arms, especially about the elbows, than elsewhere. They then became as dark on the body, were quite plain on the face, eye-balls, and eye-lids; and gave a very peculiar expression to the face. All the other symptoms were equally severe; pulse 130, hands and feet livid, and very great distress, particularly at night. But there was one symptom she did not exhibit. The brain remained comparatively free. It is enough to add, that after a prolonged struggle, this case recovered; crisis occurring by sweat and sleep; each prolonged over nearly three days.^a

^a This case was the more remarkable as she laboured under chronic phthisis at the time; and, as I believe, adherent pericardium; for she had been under my care previously, suffering from acute rheumatism and pericarditis.

CASE VIII.—The sister of last patient, aged 19, when seeing her people in hospital, fainted, and from that moment her fever began. Like the last she was extensively spotted, even on her face; but the spots were brighter on the arms than elsewhere. She presented no peculiar symptom, and made a rapid recovery.

CASE IX.—Oxford, shoemaker, aged 18, fine skin, admitted May, 1861, with fever of typhoid type. He described the attack as commencing on a particular day; nor did he vary from this though asked several times. He had all the usual symptoms, including a few spots on the chest and abdomen. His nose bled early in the attack, and again on the ninth day it bled three times; still later, on the eleventh day, he lost some blood from the bowels, but not in serious quantity. His recovery was rapid.

CASE X.—Dalton, girl of 20, fine skin, admitted May, 1861. Ill three weeks, but only confined to bed three days. Presents all the signs of typhoid fever in a severe form. Tongue red and densely furred, stomach very irritable, diarrhea, with the characteristic discharges most profuse; no spots visible. Four days after admission there was an effort at crisis by sweat (she was now ill 25 days), but it did not prove salutary, and the fever ran on three weeks longer, during all which time the stomach remained irritable, and also the bowels. But the symptoms had materially declined in severity; still I could not pronounce the patient well; and as signs of hectic now began to appear, it was thought best to send her to the country, her recovery being very doubtful. There can scarcely be a doubt this patient had ulceration of the bowels on admission.

CASE XI.—Mr. —, pay patient, aged 24, had a rigor on Saturday, 27th April; admitted 2nd May, 1861, labouring under fever. Very generally spotted over body, and plainly on the backs of the wrists; none of them dark. Has a musical bruit over the heart, attending the first sound. Eyes injected, skin hot, bowels moved four times during the last 24 hours. Has no pain on pressure nor tympany. As the case progressed the tongue got dry and brown, and sordes appeared; and the bowels still remaining too free, specific treatment was used to moderate their action. Finally, crisis by sweat occurred; this was slight at first, but at the end of 48 hours it had become very profuse, and terminated the fever. The bruit

was persistent. In this case I had the valuable assistance of Drs. Stokes and Hudson.

CASE XII.—Mr. —, pay patient, aged 19, fine skin, admitted August, 1861, with fever of typhoid type; except his having epistaxis three times in one day, and early in the disease, the case presented nothing peculiar, and he got steadily well when specific treatment was used, but not till then.

CASE XIII.—Mr. —, pay patient, was seized with a feeling of illness after remaining nearly half an hour in the sea. For some days he struggled against it, but at last had to keep his bed; and when seen on 23rd day presented all the symptoms of typhoid fever. The spots were well marked, the skin had calor mordax, and there was slight tympany, with pain on pressure, and sharp diarrhea. His nose bled slightly on the 25th day, at a time when his pulse was, in a marked degree, dicrotous. This case was very rebellious to treatment, and ran on till the 37th day; and the tongue began to clean, and become moister, some days before the other symptoms improved. When at the worst this patient presented a curious alternation of raving and stupor.

CASE XIV.—A man of 25, of unusually fine make, and tall stature, was admitted in August, 1861. His skin was very fine. He was ill some days; but the exact number could not be made out, and he had all the symptoms of fever of a typhoid type. There was also great raving, and again stupor. The case got steadily well; except that his convalescence was delayed by the formation of several bullæ on the hips. It was curious that other cases suffered in exactly the same way, at the same time; but they were not under my own care.

CASE XV.—Kernan, a man of 26, fine skin, admitted August, 1861, with fever; ill seven days. For the first two or three days the type of fever very doubtful; then diarrhea began, and spots came out; at first very characteristic of the typhoid type of fever; but in two days they had become a regular crop, of a uniform colour, over the whole body; there were none, however, on the face. Three days later still, a totally different rash appeared; it was distinctly elevated, very plain on the face, and over the entire person, and more like lepra than anything else to which I could

compare it. It came out very rapidly, and lasted exactly four days. The fever, which did not seem to be influenced by it, yielded but slowly. The tongue all through was red, furred, and angry looking, and this condition of it was the last symptom to disappear.

CASE XVI.—Mr. —, pay patient, aged 30, pock-marked, very fine skin, admitted after being 14 days ill of fever of typhoid type. Spots and diarrhea very marked; but there was neither pain on pressure, nor tympany, nor raving. Though this case was not a severe one, it did not yield till specific treatment was used.

CASE XVII.—Nugent, a woman of 30, came in October, 1861, to the hospital, with so little wrong that I had doubts about taking her in. As she had been complaining however for three weeks, had a red tongue, and some pain in abdomen, she was admitted. She had no diarrhea. She remained in this state eight days; not well, and yet apparently so little wrong that she could scarcely be said to be ill. The pulse was not raised, no spots had appeared, no tympany, and pressure on abdomen caused uneasiness rather than pain. The tongue, however, remained still very red, but without fur. At the end of the time described, and when she must have been nearly 30 days complaining, fever began to light up. The pulse quickened, the tongue got furred and tremulous; she became deaf, began to rave; subsultus showed itself, with extraordinary tremor of the hands, and, in spite of every care, there was stripping. In this way she went from bad to worse, and died on the 24th day from her admission into hospital; so that her illness occupied at least six weeks. I regret to say no examination could be obtained. It must be left to others to say where they would place this case.

CASE XVIII.—A child of eight years old, private case, was attacked in October, 1861, with gastric fever of a severe form. All the symptoms ran very high; there were raving and great restlessness. In the progress of this child's illness the fever put on all the characters of typhus. The lips and tongue became covered with sordes to a degree rarely seen in childhood; there was great stupor for several days, and tympany in a very marked degree. No spots appeared; the child made a good recovery.

CASE XIX.—M'Kee, a lad of 20, fine skin, admitted November, 1861, labouring under fever of a typhoid type. He had been ill

several days, exact number not known. All the symptoms, including the spots, very well marked. There was not any peculiar feature in this case, except that it proved most rebellious to treatment, not yielding till the medicine was carried to the highest dose.

CASE XX.—Cahill, woman of 30, admitted in last week of November, 1861, labouring under fever of five days' duration. The attack was marked by a pulse of 140, by bright and injected eyes, and raving for the first three or four nights; tongue furred and reddish. but moist, and keeping so. This case proved most embarrassing. It went on day after day without the slightest appreciable change, except that the raving ceased. She was repeatedly examined to see if any local cause existed to account for the duration of the fever; and with this view was seen by Drs. A. Smith, Moore, and G. A. Kennedy, but none was detected; neither were there spots at any time, whilst the pulse kept up to 140. In this way the fever went on till the 32nd day, when sweat appeared; which though very marked and aided by treatment, did not resolve the attack. But it recurred again on the 39th day, and now proved critical; the pulse falling to 96 within the first 24 hours. The sweat lasted continuously for three days, and was to a degree rarely witnessed. It could be seen literally steaming through the blankets. Though a long time very weak she made a good recovery. In former years I have seen similar cases; and believe they are to be set down to peculiarity of constitution, rather than type of fever.*

CASE XXI.—Boylan, a woman of 50, admitted December, 1861, 12 days ill of typhus fever. She was densely spotted, and sordes so great as to prevent her putting out the tongue; recovered.

CASES XXII., XXIII., XXIV.—Three children of last patient, one girl and two boys, were in hospital at the same time, labouring under fever. None of them were spotted, but one of the boys had a much severer attack than the other two; he was the youngest, being seven years old.

This brings my remarks to the beginning of the present year; when it was observed that fever began to increase; not only in Dublin, but also in some of the healthiest localities about it. A

* Though several of the cases given presented crisis, I have not thought it necessary to dwell on it in this paper. It will be observed that it occurred in both types of fever. It is certainly much more frequent in some years than others.

large number of the middle ranks were attacked, and in our hospitals the increase was very marked. But the change in type was the most remarkable point observed. As, however, I have reasons for knowing that an account of what occurred in other hospitals will be published, I shall continue to notice only what came under my own eye.

CASE XXV.—Newbottom, a boy 12 years old, admitted in February, 1862; labouring under fever in a very severe form. He was densely spotted, had great sordes, tympany to a very marked degree, and stupor. Some who saw him thought he would die. His recovery was rapid.

CASE XXVI.—A girl of 16, passed through the heaviest form of typhus; during which she was densely spotted. The spots were very dark on the body, but of a much lighter hue on the arms and wrists. She had tympany very marked. Recovered.

CASE XXVII.—Neill, a man of 20, very fine skin, admitted February, 1862. He had fever of a typhoid type, well marked in every respect, except that from first to last no spots appeared. His chest was a good deal engaged.

CASE XXVIII.—Mrs. —, aged 47, living in suburbs; was attacked with fever of the gastric type. The tongue was red, and slightly furred, pulse 130, and she complained much of her head, with a sense of heat in the stomach; here pressure gave pain. She preferred cold drinks. There was constipation all through. The attack lasted 24 days, and no spots of any kind appeared. At the height of the disease there was a great deal of tremor, especially of the extremities. The tongue changed to the healthy state very slowly. This case I saw with Dr. Boles.

CASE XXIX.—A gentleman, aged 33, residing four miles from the city, was attacked with fever of the gastric type. For the first three days there was considerable irritability of the stomach; there was also very distressing intermittent headache, and a complete loss of sleep. No spots appeared. All through there was constipation, and the urine had a large deposit of lithates in it. On ninth day there was a marked effort at crisis by sweat, but it did not end the attack, which went on to the 21st day, when sweat again appeared,

lasted off and on three days, and proved critical. In this case I had the assistance of my friend, Dr. Hudson.

CASE XXX.—Barlow, a woman of 55, admitted March, 1862, with fever of the gastric type; except running on more than 20 days it presented no peculiarity.

CASE XXXI.—Lacy, a woman of 45, admitted March, 1862, when 17 days ill of gastric fever. She was much sunk in the face, and the upper lip was broken out. The tongue was very red, hacked, and sore; and yet had little fur on it. No spots visible. All through there was constipation. Her recovery was very tedious.

CASE XXXII.—Fegan, a man of 30, admitted March, 1862; he seemed to have little wrong; and yet there was a something about him which at once caught my attention. Any complaint he made was referred to the stomach. He had a loud harsh cough; for which, however, I could make out no cause. The first day there was nothing of what could be called fever on him. The second, a marked change had occurred. His pulse was now full and bounding, though beating only 86; and he complained of having got no sleep, and of his throat being sore. On looking into it I found it was red; but there was no ulceration nor effusion of lymph. From this time forward—being now six days ill—fever slowly but steadily increased from day to day. The tongue, at first morbidly clean, became red and furred; the skin hotter; pulse quicker; nights worse; great distress, with marked prostration. There was also some discharge from the eyelids, and for the last two days of life very marked tympany. He died on 13th day. In this case no spots appeared, nor was there diarrhea; and the mind remained all but clear. The patient was of a full habit of body, and impressed me with the idea that, though fat, he was in bad condition. It must be left to others to give this case a name.

CASE XXXIII.—Mrs. W., pay patient, aged 30, admitted, April, 1862; being 10 days ill of fever. She was copiously spotted; eyes injected and suffused; and her tongue very dry and rough, but not much furred. There was no tympany, but the bowels had been and still were too free; being disturbed three or four times in the 24 hours—discharges darkish. In the progress of

this case the pulse became, in a very marked degree, irregular; but as the fever went off it regained its regularity. The diarrhoea had to be specially treated.

CASE XXXIV.—Flanagan, a girl of 20, very fine skin, and rather fat, admitted, April, 1862. Her mother states she is now 10 days ill, and she presents all the signs of typhus fever. She is heavy and stupid; pulse rapid; lips and tongue covered with thick sordes; no spots. With these there is also sharp diarrhoea, to the extent of six times in the 24 hours; discharges light coloured; slight tympany and pain on pressure. What between typhus and typhoid symptoms this case proved most obstinate, and called in turn, for treatment to both head and abdomen. It yielded, however, about the 27th day; there being then signs of crisis by sweat; but not very marked. As the tongue cleaned, it remained red and glazed. The girl made a good recovery.

CASE XXXV.—Crickard, girl of 22, of full habit, took ill on Friday, April 25th, with signs of fever of a very low type. She had to be carried into hospital. Even at this early stage, being but five days ill, the skin was mottled. Next day the appearance on the chest and abdomen was very peculiar. There were a number of blotches, like stains, visible, of a very irregular shape, a bright hue, and much larger than any of the ordinary spots of fever. With those the fever had become more marked, and she complained of sore throat, which, on inspection, showed only an increase of redness. A day later still, ordinary petechiæ had appeared, and from this forward went on increasing till they reached the utmost possible degree of intensity. It is enough to say, that after a fearful struggle, lasting several days, this girl recovered. The lungs getting engaged was the cause of the danger. Through entire illness the brain remained wonderfully free.

CASE XXXVI.—McCormick, a woman of 24, admitted, after being one week ill of fever of the gastric type. The tongue was furred and very red; skin hot; pulse 130; eyes suffused and injected; and head much complained of; no spots visible, nor did any appear subsequently. With this state there was considerable irritability of the bowels, and slight tympany; much more pain too than is usual was present, even without pressure. The symptoms

did not yield till specific treatment was adopted. The fever ran out 21 days.

CASE XXXVII.—Convey, sailor, aged 26, admitted May, 1862; ill of fever, but not known how long. He was densely spotted, and all the spots were of the character of petechiæ; some, however, being of a darker shade than others. His tongue was very red and dry, and skin hot. Very severe diarrhea was also present for the first 36 hours; after which it moderated, but did not cease. There was also slight tympany, with pain on pressure. As the eyes were much injected, and the brain engaged—the patient being heavy and stupid—the abdominal symptoms were not interfered with for three days. But as the diarrhea still continued to the extent of four times in the 24 hours, it was then thought advisable to treat it, and five days later it had all subsided. When in this state, and all appearance of danger had passed, the spots having quite disappeared, and pulse fallen, the patient was suddenly seized with violent delirium; getting out of bed and ultimately requiring restraint. For this he was treated with tartar emetic and opium, and with very striking benefit, and he then made a very good recovery.

CASE XXXVIII.—Bellew, servant, aged 45, of tall stature, thin, admitted, May, 1862, with all the signs of fever in a very severe form. He had to be supported into hospital, and though not a week ill, was already densely spotted, and his tongue dry and brown; eyes very much injected; expression heavy. There was also very severe diarrhea which seemed to cease suddenly within 48 hours; that is, about the eighth day of the fever. From this forward the attack was as genuine typhus as it is possible to describe. The spots became of the darkest; the mind very confused, with constant rambling; and passing under him. There was great difficulty in putting out the tongue, and, late in the illness, hiccup. By the 18th day the symptoms had materially improved. The spots were gone, the tongue had expanded somewhat, and was better put out, and he took support well. His mind too was much clearer. It was evident, however, the fever had not resolved itself. The pulse had not fallen in proportion, nor the tongue cleaned, and he still remained heavy, and at times would ramble. In this state he went on till 25th day of the fever, when he died. There was no effort at crisis at any time, nor any

tympany. I was only able to examine the abdomen. The ilium had no ulceration in it; but it was very red, in distinct patches, and the more so the nearer to the cecum. In this last organ the chief lesion was found; for it was ulcerated in patches; one as large as a shilling. The ascending colon had a number of small but distinct ulcers in it. The glands were not enlarged.

CASE XXXIX.—Mr. —, pay patient, aged —, came under my care the 10th day of fever of typhus type. He was densely spotted; had a flickering and most irregular pulse, and rolled his tongue in his mouth without putting it out. There was constant movement of the lower jaw, and marked cerebral breathing. Like the last case he had had very severe diarrhea within the first week of his illness; but it had now subsided; there was no tympany. This case went from bad to worse, and died the 13th day of the fever.

CASE XL.—Mr. —, aged 41, sent for me after being 18 days ill. He was a general medical practitioner, and during these days had worked on, as he best could, at his profession. His illness began the 1st of May, after having got a severe wetting: within a day or two of which diarrhea set in, and continued, off and on, till the time of my seeing him, in spite of the use of astringents which he had used freely. I found him in his parlour, and the immediate cause of his sending was, that he had had a rush of blood from the bowels, upwards of a pint. With this he presented the usual signs of fever of the typhoid type. By keeping him in bed and treatment, he seemed to get better; especially as far as the diarrhea and bleeding went; and so matters went on till the 28th day of his illness, when, at one o'clock in the morning, he was suddenly seized with severe pain in the abdomen, and lived only 13 hours after. No doubt of it, perforation had occurred. He had no vomiting.^a

Though the details of these cases may seem to have interrupted the line of argument pursued at the beginning of the paper, to myself they appear but a continuation of it. With two points of exception they may, I believe, be taken as a fair sketch of the types of fever prevailing in Dublin within the last two, and some

^a My friend, Dr. Moore, knowing I was engaged on the subject, kindly gave me charge of some of the cases detailed.

former years. These types were the typhus, typhoid, and gastric.* Leaving out the latter for the present, the reader will have observed the striking contrasts which these cases present; we find cases of typhus in both young and old;—of typhus without spots;—of typhoid with none, with one or two, or with an extensive crop of them;—of typhus with the brain wonderfully free;—cases of typhoid, but more numerous, the same;—of both typhus and typhoid in which the state of the tongue and parts about were identical from sordes;—many cases of either type with the chest not engaged at all, or so slightly as not to call for treatment:—instances of both types with and without tympany;—cases of either kind entirely free from hemorrhage; a freedom remarkable when compared with former years;—and lastly, the modified types of fever which the present year has disclosed.

Now let it be observed that each and all of these have been dwelt on by those who argue for the plurality of poisons, and who would separate the two types as different fevers. But where, I would ask, is such a difference as would entitle them to be so considered? Not surely in those refinements of diagnosis on which so much labour has been bestowed, and by such a number of writers. When I go to the bedside and try to make them out I find them so mixed up that it is utterly impossible—at least, it appears so to me—to separate them. And the difficulties are equally great whether we endeavour to keep the symptoms separate, and so make out two distinct fevers; or whether we strive to keep in one group the type of fever known as typhoid. This last point, I think, has not received the attention it deserves. Let any one take some half dozen cases of this type and just observe the contrasts or modifications they present. This has been already done in the cases detailed; and I think they may be appealed to as ample evidence of the point for which I argue. Nor am I alone in this statement? “*Sometimes,*” says Louis, “*the diarrhea and meteorism were the most prominent; at times the depression of strength, delirium, spasmodic motions of all kinds; and according as one or the other was most prominent the disease had the appearance of putrid or ataxic fever; sometimes, likewise, that of inflammatory*

* For some months past, I observe that in London fever has prevailed much above the average. In June, 1862, the deaths have been doubled; and in one week's return of this month, out of 82 deaths, 39 are set down to typhus; 17 to typhoid, and the remainder to what is called “fever.” It would be very desirable that we had some more accurate account of this last class. The want of such throws great obscurity over the whole; for it must have been referred to some one type of fever.

fever; in some individuals there was no delirium, or it was very slight, and, notwithstanding the most grave lesions, the calmness continued until death. Notwithstanding these different aspects the affection was constantly the same; the principal disorder did not change." So much for Louis, who is speaking of typhoid fever.—Vol. II., pp. 8, 9. Here is another extract taken from a lecture by Dr. Gairdiner of Edinburgh, which appeared in the *Lancet* of July 21st, 1860. "*Nothing then can be more variable or less characteristic than the general symptoms of this (typhoid) fever. I have seen it resolve itself in ten days with the symptoms of febricula, or of a mild remittent fever; I have seen it, on the other hand, last nearly as many weeks, and pass imperceptibly into organic disease. It mimics, in turn, not only all other fevers, but many other general or local diseases; phthisis, pneumonia, meningitis, perhaps more frequently than most others.*" It will be remembered that those two writers are strenuous advocates for the essential difference between typhus and typhoid fevers. How they could make such admissions, and still hold such opinions, I leave to others to explain. Nor would there be any difficulty in giving other extracts of a similar kind. Thus, Louis' description of the state of the tongue in typhoid fever, might literally be taken as if he were speaking of typhus. It would be unnecessary to either add or detract from it. And so of other symptoms. The extracts given, however, are enough for my present purpose. They prove conclusively that fever of the typhoid type assumes many varied aspects. One says it may take on the putrid, ataxic, or inflammatory forms. The other the form of a febricula, or remittent fever; nay, even that it mimics such diseases as pneumonia, meningitis, &c. In most of these statements I can fully concur, because they entirely accord with my own experience; and would ask, with such admissions from the opposite party, what more is wanting to settle the point? or how will writers who have seen and described but one phase of fever of the typhoid type explain them, except they adopt the views of those who consider there is but one poison, which causes all the variations met with? I confess to seeing no other solution of the difficulty.^a

But some one will say here that I have not noticed those symp-

^a In connexion with this part of the subject, I would direct attention to the two chapters in Louis' Work; one on latent typhoid affection; that is, where the local lesion was not accompanied by the usual symptoms; and the other where, with all the common symptoms, the local lesion of the intestine was wanting.

toms which are considered specially characteristic of the typhoid affection, that is diarrhea, and the rose-coloured spots. This was purposely done; and with the object of speaking separately of the two points of exception which the fever of the last two years presented to my notice. The first of these was the very great prevalence of fever of the typhoid type. It exceeded anything I have seen in former years; as the cases detailed fully prove. And yet our city, during the same period, has been materially improved in its sewerage. Not that I have the slightest faith in bad sewerage causing typhoid more than typhus. But it looks strange that a type of fever, rare with us, should appear at a time when the specific cause of it, as many think, was being lessened. Yet such is the fact: no matter how we may explain it.

It is to the second point of exception, however, that I would more particularly ask attention, as bearing directly on the question under discussion. I mean the change of type which, within the last eight months, fever has shown in Dublin. The change at first seemed to be the gastric type; to which was shortly added diarrhea in nearly every instance; and this latter again occurring in a large number of cases which presented all the characters of typhus; including a dense crop of petechiæ.^a Some of these cases, it will be observed, have been detailed; and I know that others met with them in much greater numbers, and with exactly the same characters; that is well marked typhus with severe diarrhea. The case of the girl Flanagan, No. 34, is worth noting; she had neither the spots of typhus or typhoid, but she had every other symptom of the two types united; nor have I myself the slightest doubt but that Peyer's glands were affected.^b Did time permit, many others of the cases given would call for a special notice. But I must hasten on.

^a As bearing on this part of the subject, Huss's work is very specific; thus he says:—"It very often happens that epidemics, presenting at the beginning, or when at their height, all the characters peculiar to typhus, at the close have entirely assumed the form of typhoid, after the gradual development of several intermediate forms." Again:—"In many cases the symptoms appear simultaneously, so that the petechiæ and the lenticular spots may both be found copious at the same time."—"The conclusion," he adds, "I draw from this experience is, that the typhus and typhoid fever, such as they appear in the climate of the north, belong to one and the same pathological process; but that that which we call the typhus process presents several different varieties."—(See Introduction *passim*.)

Of 59 cases of typhoid fever given by Flint, rose-coloured spots were present in but 35; and in the analysis of cases of different years, they prevailed much more in some years than others. He says he can offer no explanation of this disparity.—(P. 181.)

^b One of the cases recently given by Dr. Warde (No. 3), and published in the *Medical Times and Gazette* for May, 24th, 1862, was exactly of the same character.

Of the morbid anatomy of those mixed cases of typhus and diarrhea, I regret that I got only one opportunity of making an examination; and it will have been noted that the lesion found was confined to the cecum and first part of the colon. It is specially to be observed, however, that it answered, in the most exact way, the description given by Louis of cases of typhoid fever, where there was also an affection of Peyer's glands. Nor must it be forgotten that Louis found the colon and cecum affected in a third of his cases; and, as it is admitted by all that the affection of Peyer's glands does not necessarily bear a relative proportion to the fever, it seems to me fair to conclude that the case given, No. 38, belonged to the typhoid type of fever; and so of cases 33, 37, and 39; all, it will be observed being well marked examples of typhus fever. If, however, my own experience be wanting, I am glad to be able to give that of my friend Dr. Gordon, who is attached to a large fever hospital, and who informs me that in the spring of the present year he met with ulceration of Peyer's glands in connexion with well marked cases of typhus fever; including a crop of genuine petechiæ. So that the fact may be looked on as absolutely established that the two types of fever existed in the same patient and at the same time; and in what might almost be called an epidemic form; so prevalent was it.^a Though this be the first time of the statement of such an occurrence in Great Britain or Ireland, it must not be forgotten that exactly the same has come under the notice of Huss, and is particularly dwelt on by him.

The conclusion, then, at which, after the fullest consideration of

There were no spots of any kind; whilst the symptoms generally were a mixture of typhus and typhoid; and on examination but one large patch of an ulcerated Peyer's gland was found, with an ulcer of the smallest size close to it. The same gentleman also states, that on one occasion a mother and child were admitted to hospital; the former had typhus and the latter typhoid fever. These are tell-tale cases.

An Argument advanced by Dr. Gairdiner of Edinburgh is, that because some four patients who had passed through enteric fever, were, within a few weeks, seized with typhus fever, therefore these must be distinct forms. I only wish he had seen our Dublin epidemic of 1847-48. He would then have witnessed, in numbers of cases, two, and sometimes three, distinct types of fever occurring in the same patient, and literally before they left their bed: and to account for such varieties by different poisons would clearly be a straining of any knowledge we possess of the poison of fever. When two types of fever followed each other directly, one would be very generally spotted, the other not.

^a Dr. Cronin, at present assistant in the Britain-street Hospital, informs me that in the spring of 1861, the same mixed kind of fever prevailed in the County Kilkenny; there being diarrhea, often very severe, present in almost every instance; with many cases, though not the majority, densely spotted at the same time.

this question, I have arrived is the same as that of two years since; but with still stronger convictions on the point. *I believe that the two fevers known as typhus and typhoid are the result of a single poison; and that no other hypothesis can explain so well all the difficulties of the case.* I consider, further, that those who hold for a plurality of poisons, are bound to explain the facts already given in this paper. They should tell us why the symptoms of those two affections so often run the one into the other; why the same type of fever, whether typhus or typhoid, presents such marked contrasts; why typhoid may assume the characters of putrid, ataxic, or inflammatory fevers; febricula, meningitis, &c., and still be typhoid all the time; and this, be it observed, is described by those who believe in the two distinct poisons. They will also have to answer the argument taken from analogy, and tell us if scarlatina affords the most marked contrasts, why fever should not do the same; also how it has happened that symptoms which one writer considers essential to the natural history of typhoid, are ignored or made little of by another. And, in the last place, an explanation must be given of what has occurred in Dublin this year—that is the union of typhus and typhoid in the same subject. Now one and all these points may be satisfactorily explained on the idea of the existence of but one poison. I confess, however, it appears to me impossible to explain them on the theory of two. But, if we admit two, why not more; for assuredly there are other types of fever just as distinct as typhus is from typhoid. And this leads me to notice the third type which prevailed this year in Dublin, and particularly amongst the middle ranks; I mean gastric fever. I hold that it is essential it should be distinguished from typhoid fever, with which it has the nearest connexion; were it for no other reason than that its treatment is very different. Several cases of it have been already detailed; but, except to notice it as a special type of fever, I am not about to speak of it further here. It was, I believe, to this type of fever that the cases given, which might fairly be called anomalous, are chiefly to be referred.

Before concluding I would make a few general remarks, of the most cursory kind, on the treatment of the typhoid type of fever; not that I have anything new to offer; but that the treatment adopted by some is not of the specific kind which this affection appears to me to require. We know that of late years anything of what would be called active treatment has been most materially modified, if not quite given up. Thus in Bartlett's work, which

appeared in 1847, the measures recommended included the regular antiphlogistic treatment; whilst five years later Flint speaks of much milder measures being adopted. The late Dr. Todd, of London, we know, strenuously recommended the stimulant plan; which, it must be allowed, he carried as far as any discretion would justify; and in a published lecture of the present year, Dr. Warde, of the Dreadnought Hospital, London, has advocated the leaving the disease very much to itself. Now I mention these plans, not to criticise them; but to state that each, in its turn, will be found useful; and that no physician who has fever to treat on the large scale, will bind himself to one or the other. Every single instance must be treated by itself, and symptoms must be met as they rise. If this be done, I believe the typhoid type to be the most amenable of the many forms of fevers, provided it be seen in an early stage of the disease. Speaking of it as I have generally seen it, I would say it is not a fever to be left to itself; and several of the cases which have been detailed prove this; for there was no amendment till treatment was put in force: on the contrary, some of them were going from bad to worse. When then the case calls for it, and this is to be learned from the local, as well as the general symptoms, I never hesitate to have leeches applied over the right iliac region, followed by a poultice; taking care the bites do not bleed too long. A more common plan, however, is the application of a blister to the same part; nor can I doubt the great value of such means, and believe it is not as generally used as it might be. The blister may be repeated with the best results; nor should we ever forget that the local disease with which we have to contend is very apt to be slow in yielding; that a relapse may readily occur, and when this happens the disease is rendered very much more grave than it was. Our object, in truth, is to prevent ulceration; for if this once occur the chances of recovery are materially lessened. I state this because a recent writer speaks of the disease as if ulceration must necessarily take place. I believe this is an erroneous way of considering the matter; and that we can, by treatment, anticipate, and so prevent it. "*Obsta principiis*" is all important here, and a principle never to be forgotten.

Of the internal treatment I have had no occasion to change from what was spoken of in the former paper. As an astringent I find the dilute sulphuric acid, in the proportion of one to three drachms to the eight ounce mixture, by much the best remedy. No other of the class of astringents seems to me to act at all so satisfactorily;

and it can be modified, with the greatest nicety, to the demands of each particular case. I have often seen medicines, such as chalk, gallic acid, lead and opium, unavailingly used; and then from the moment this acid was given the patient began to amend. But it is not to be used without discretion; for it may check the diarrhea too suddenly, and the chest or brain may so become engaged: hence, it is best to begin with a moderate dose, and increase if the necessity arise. The rule is that the diarrhea is to be gradually lessened; not suddenly stopped. In mild cases I find the acid infusion of roses a very suitable medicine; and, when there is pain, from two to six drops of laudanum, in each dose of the mixture, commonly answers well. The sulphuric acid, I need scarcely add, is the favourite remedy with Huss. When there are signs of irritation in the colon, and more especially when there is tenesmus, an anodyne enema acts like a charm.

Dr. Warde, to whom I have before alluded, speaks of salines as being suited to the treatment of fever of the typhoid type. Such may answer in London; but with us in Dublin they would be positively injurious. Their effects on the healthy frame are quite too powerful to suppose that they would not act equally so on the frame weakened by a disease like fever; of which the best treatment now avowedly is, what may be called, conservative. To the class of salines I would add the carbonate of ammonia, which I believe to be too indiscriminately used; and which, in my own experience, does not suit the type of fever of which I am speaking. I have known a very few doses of it bring on diarrhea; not only in this fever, but in many other diseases; and, if my memory serve me right, I have seen a similar remark made by Sir Benjamin Brodie; and would hence hold out a warning against the use of either salines or alkalies in all diseases of a lowering type.

There is a class of cases of the typhoid fever in which, without any interference, the diarrhea suddenly ceases; whilst the chest, or it may be the brain, gets as suddenly involved. All such I have found turn out most critical, and I have latterly been in the habit of keeping up, for some days, a discharge from a small blister, usually put on the chest. In this way I think I have seen very beneficial results follow. It seemed as if the poison were, in part at least, got rid of by the system; and all went smoothly afterwards. The point, I believe, is worth bearing in mind, and so is mentioned.

In the last place I would notice a point which was also spoken of

on a former occasion. Are stimulants, as a class, used too indiscriminately? I think they are. It seems a very general impression that if they are to be used, it matters little of what kind they are: hence, brandy, wine, and beef tea, are constantly spoken of as being given to the same patient. Now I do not deny that all may be required at the same time. But I do say that in numerous instances judgment is to be exercised; for most assuredly the effects are not the same; and when their different composition is considered this need not excite wonder. Thus, if we compare wine and beef tea, the former, contrary to what might at first be thought, may be given with much less risk than the latter; and I am sure I have seen cases where secondary inflammations—in the chest amongst other parts—have been lighted up by want of attention to the very point of which I speak. Though much more might be said on this subject, enough has been advanced for my present purpose.

In conclusion, I would observe, that the class of mixed cases, as they may be well called, require even more than the ordinary amount of attention. The fever becomes so heavy in many of them that the abdominal symptoms are very apt to be masked, and so may readily be overlooked. In such cases too, it may be requisite to direct our treatment at one time to the chest, or again, to the brain; and, in some of the cases given, a combined treatment had to be adopted.

ART. VIII.—*On Galvanism as a Therapeutic Agent*. By HARRY LOBB, M.R.C.S.E., &c., &c.

THANKS to the labours of the medical profession at home and abroad, galvanism, as a therapeutic agent, is at length taking its legitimate position in the science of medicine. Rescued from the ignorant and unscientific administrator, into whose hands it had almost entirely fallen, some of the most eminent men in the ranks of our profession have turned their attention to its study, and with the aid of the sister sciences, anatomy, physiology, and pathology, have elicited some most remarkable results. The late Dr. Golding Bird, a far-seeing and most intelligent physician, stated his belief that it was to galvanism the profession must look for some of its future triumphs. This opinion has been fully endorsed by a large