I have observed that students were occasionally under a misapprehension about the doctrines which we have long held in this hospital with respect to the condition of the heart as a guide for the use of wine. They have come to the erroneous opinion that we are to give wine only when we find the want or diminution of the first sound of the heart, and that we are not to give wine where the heart is acting well. This is a mistaken view. As to the state of the heart in connection with the effect of stimulants, we have ascertained that the efficacy of stimulants is often directly as the debility of the organ. It has also been ascertained that the power of bearing stimulants, their effect upon the nervous system, their good effects on the general condition, are directly as the weakness of the heart.

We may lay down as a rule, that there are three conditions of the heart to be looked at by the practical man in the treatment of fever.

In one, we have an excited heart—a violently excited heart all through the case; and this, although the symptoms be those of extreme adynamia, although the surface be cold, the breath cold, and the pulse so feeble that it cannot be discovered. Nay, the heart may act with great force for several days, and yet there may be no pulse at the wrist. This is one case.

In the next case, we find an exactly opposite condition, in which the systolic force of the heart is diminished. This is shown by loss of impulse, by diminution—and, in certain cases, by extinction—of the first sound of the heart, while the second remains. This is a case which calls for wine, and in which you should give it; it is a case in which, in the vast majority of instances, wine will agree with the patient.

There is a third set of cases in which the heart does not seem to be implicated at all in the course of the disease—in which, notwithstanding the existence of the most extraordinary group of symptoms affecting various organs, the heart, in the middle of the storm, seems to be in a state of calm and quiet.

If we compare these three conditions with a view to prognosis, we may arrange them in this way. The excited heart all through, with feeble pulse and with adynamia, is unquestionably the worst. There is no worse symptom in fever than an excited heart. It is especially a bad symptom when, with that excitement, we find a feeble pulse. Next will be the case of sinking of the heart; and the most favourable condition is that in which, as I said before, the heart seems to escape disease.

You are not, however, to suppose that because you have an excited heart you are not to give wine; or that, because the heart is not affected at all, you are to withhold wine if in either case the general symptoms of the patient require it. You are not to found your exhibition of wine or other stimulants upon any one thing; you are to take the general state of the patient into consideration. What we have done is to discover an intelligible practical rule which will guide you in the use of wine in certain, I think in many, cases; but you are not to suppose that because a man has a clear first sound of the heart, therefore you are not to give him wine. You are not to suppose that because the heart is safe you can do without wine. Now, in a case recently under your observation, although the heart seemed to escape, or was at most only feeble through the course of the disease, frightful adynamia existed; day after day the patient's face was Hippocratic, or almost so; the general character of the disease was that of the most terrible putrescent fever—yet his heart escaped. And here is the result. We have given that man upwards of twenty bottles of wine and twenty-four ounces of brandy, and now, on the twenty-eighth or thirtieth day of the disease, we have the satisfaction of feeling that his case may be set down as among the triumphs of medicine.

I wish also strongly to impress on you the great importance of the use of other forms of nourishment in this disease; for we must not only keep up the nervous energy of the system by wine, but we must support nature by food. There is no greater mistake in fever than that of the withholding of food.

LECTURE XXVIII.

STIMULANTS IN FEVER, *continued*—Signs in connection with the heart of the agreement of stimulants: (1) return of impulse, (2) return of first sound, (3) gradual fall in the rate of the pulse—In cases of "fœtal heart" great boldness in stimulation is needed—No certain rules as to quantity of wine and whiskey or brandy required—Examples of free use of stimulants in malignant typhus—Case of Hardcastle (typhoid fever)—Eruption of vesicles as a secondary complication—Bed-sores.

WE are to-day to consider practically the use of stimulants in fever. This is a matter difficult to be taught orally. The exhibition and the management of stimulants in fever are among those points in practice which are best learned at the bedside, so that when I am addressing the advanced students—men who themselves have already largely shared in the responsibilities of the fever wards—I do so as a fellow-student on the one hand, and a brother practitioner on the other.

Many medical men who have received little beyond a surgical education, or who have not had a case of fever on their hands before they entered into practice, and who probably have never attended in the wards of a fever hospital, on their first meeting with the disease, are timid in the use of wine in fever, and have not learned that in this disease the symptoms of inflammation are commonly fallacious. This, as I have before said, is from the nature of their medical education. Here we see the wisdom of that regulation of the University of Dublin, in accordance with which all candidates for the degree of Bachelor of Medicine must show that they have personally attended at least five cases of fever before being admitted to examination.

As experience increases, men become less timid in the use of wine, and accordingly we find that those physicians who are sneeringly termed men of the old school, are often the best practitioners in fever; they have learned by experience in middle life what you have been taught in your student days, and they know, by their perception of the vital phenomena, when to give or not to give stimulants, when to increase, to diminish, or to omit them.

Now it is a great thing to possess a simple rule which will guide the practitioner who has had little or no experience in this matter, in the exhibition of wine—and I believe that in the observation of the physical signs of the heart, he will obtain such assistance. You will not suppose that I advise you to be guided solely by the state of the heart, but I say that in solving the question as to the use and the management of stimulants, you are to ascertain and consider in every case the condition of the organ *plus* the general symptoms and history.

We have already studied the anticipative use of wine. Let us suppose we have a case of maculated typhus, say on the sixth or eighth day—the pulse not very weak, and at 115 or 125 in the minute; you find that the impulse is not strong, or it may be absent, unless when the patient lies on the left side—the first or ventricular sound is lessened. Under such circumstances the use of wine is called for, and there is a strong probability that it will agree. You begin with six or eight ounces of good port in the day—given in divided doses, together with proper food.

It will always be right that in such a case you should see the patient in the course of six or eight hours, to judge whether the stimulant has agreed; in a few cases even at this period of the fever the depression of the heart goes on rapidly, and if so, the stimulant will have to be increased. Should things on the next day remain without change, and should there be no signs of the stimulant having disagreed, you may continue. By-and-by it may happen that the first sound of the heart disappears, so that the organ acts with a single sound, even over both ventricles. This indicates increasing debility, and calls for a free use of the stimulant, and, in many cases, the employment of brandy, for which a good vehicle is warmed milk with a little sugar.

Now, in most cases of typhus fever in this country with favourable result, the prostration of the patient, of which the heart is commonly so good an index, begins to disappear at about the twelfth day, but you may find evidences that the wine has agreed even before that period. Of these the principal are:—

1st. The return of impulse.

2d. The commencing re-establishment of the first sound.

3d. The gradual coming down of the rate of the pulse.

Of these, the second and the third are the most important, for the return of impulse is sometimes the commencement of an excited state of the heart—always an unfavourable symptom in fever. When the first sound is restored in its normal manner, the process is gradual, being commonly first perceived over the right ventricle, and when completed it has its natural character.

But with regard to prognosis, the best indication of the agreement of stimulants is the lessened rate of the pulse; even a slight diminution, say of two or three beats in the minute, is of great importance. If at your next visit the diminution of rate goes on, it is a great encouragement to a good prognosis. Remember how often we have seen a good result when the only favourable point in the case was that the pulse became slower and slower while stimulants were being freely used. Still, to say that the falling of the pulse under stimulants is a certain ground for a good prognosis would not be justifiable, as we shall see presently.

In cases of extreme nervous prostration and debility of the heart, as shown by the fœtal character of the sounds—or in some instances by the extinction of all sound, while the pulse continues—great boldness may be used in the administration of stimulants. It is true that in examples of the "fœtal" heart the ventricular sound continues. Yet we have found that the lessening of the second sound is an important sign of generally deficient vital energy, and the necessity of free stimulation. Of this I offer no explanation, but of the fact I am certain.

It is very difficult to lay down rules as to the quantity of wine or other stimulants that may be required by circumstances, and you have seen cases in which the patients took a quantity of stimulants,

which in the state of health would have produced intoxication. We have commonly given from 16 to 24 ounces of wine with half a pint of brandy in the day; and in many cases we might have given more, and with advantage.

In a severe case of maculated typhus with extinction of the first sound over both ventricles from the seventh day, 96 ounces of wine with five ounces of brandy were exhibited. The coming down of the pulse was remarkable.

Thus on the	7th	day it was at	124
"	8th	"	120
"	11th	"	116
"	12th	"	96
"	13th	"	80
"	15th	"	76

On this last day the skin was cool, the impulse perceptible, and the sounds proportionate.

This case also showed that peculiar character of pulse which we have observed in many examples of the debilitated heart in fever treated by free stimulation, the pulse having been restored to its natural rate, and convalscence all but established. It continued to fall even as low as 32 in the minute, when it rose progressively to its natural standard.

Thus in this case the pulse was—

17th day	60
18th "	50
22d "	32
25th "	60

The convalescence was perfect on the 18th day.

This case was a model example of typhus, in which recovery was not interfered with by any secondary lesion. The falling of the pulse so far below the natural standard is not constant, but I have always looked on it as showing that the heart had been greatly weakened, with or without muscular softening.

I have told you that no rule can be laid down as to the actual quantity of stimulants to be exhibited. Every case has its own peculiarities even in the same epidemic. You will have differences in the necessity for stimulation, differences in the degree of vital prostration, in local complication, and in all the physical signs of the heart as to their nature, combination, mode of subsidence, and behaviour under treatment. As a general rule the freer the case is from manifest local complication, *apart from the vital depression of the*

heart, the bolder may you be in stimulation. But you are not to allow the local complications—except that of active irritation of the brain—to deter you; and even in certain cerebral cases, where circumstances call for it, you may use stimulants tentatively.

Two cases of most malignant typhus occurred to me some years ago. Both the patients were medical men; one was a young man of a non-excitable and phlegmatic temperament. In this case the use of stimulants was commenced at about the eighth day, and ran on for more than a week. The symptoms were extreme prostration, continued—though not profound—coma, weakness of circulation, coldness of breath, enormous vibices, a general purpling of the skin, and paralysis of the bladder. A worse case so far as the essential disease was concerned could hardly be conceived. Fortunately the power of swallowing was unaffected, and you are not to despair of any case of fever as long as deglutition remains. During ten days the stimulants given were so varied and in such large quantity that his friends refused to continue them, thinking it would be a dreadful thing that the patient should leave the world in a state of intoxication. We could not persuade them that we knew better, and we had to send one of the class of this hospital to mount guard over the case, and to administer the wine and brandy perforce. By the twenty-first day, when the disease subsided, he had taken at least two dozen of wine, including port, Madeira, and champagne, with six large bottles of brandy. The recovery was perfect and without any accident, and the gentleman has since enjoyed many years of the best health.

In the second case I did not see the patient until the twelfth day. He was a man of high mental culture and activity of mind and body. He had been attended by a physician of the anatomical and antiphlogistic school. In place of food he had got mercury, and in place of wine, tartar emetic. A glass of claret had been permitted on the day before we saw him. There was no disturbance of the brain, but he was covered with a petechial eruption approaching to purpura. The surface was cold, and the pulse almost imperceptible. From the middle of the calf of each leg downwards, and over both feet, the surface was black, the skin hanging in loose wrinkles, giving an appearance as if the patient had on a pair of black socks. We expected mortification of the legs and feet, but, within twenty-four hours from the commencement of the stimulating treatment, the circulation was fully re-established, the blackness had disappeared, the feet had become warm, and the fulness of the limbs had returned. I need not tell you that stimulants were used boldly. In the first eight hours sixteen

ounces of brandy were given. The patient made an excellent recovery, and is still in the best health.

In both these cases the patients had been of very temperate habits. The disease was a most severe but uncomplicated typhus, the nervous system not excited, and the stimulants agreed throughout. Both cases were thus well adapted for the bold and continued use of the stimulant treatment.

Gentlemen, there is at present in our wards a patient whose case I would commend to your most attentive study. I refer to the young man Hardcastle, in whom the general symptoms of fever are presented in their most aggravated and appalling form. This patient is a native of England, and had been but a short time in Dublin. His case is full of instruction.

I have mentioned that he is not a native of Ireland because it is probable that this circumstance has acted in modifying the symptoms of his disease. Had this patient been attacked with fever in his native place, he probably would have shown the symptoms of ordinary typhoid fever, and the case would have been a comparatively mild one. But at all events, this much we may believe, that different countries present endemic, sporadic, and even epidemic fevers, with characters in some degree peculiar to themselves; and we are not yet able to explain why fever in one country differs so much from fever in another—why maculated typhus should be so common in Ireland, and comparatively rare in England—or why the fever in Paris should so commonly present a particular local lesion. Many causes doubtless act; and I suppose among others, such as climate, diet, soil, and so on, the race and temperament are to be reckoned.

I have suggested that if various families of mankind have a physiological stamp, they probably have also their pathological peculiarities. However this may be, it becomes a curious subject of inquiry, to determine what are the modifications of the symptoms of the fever in Ireland or in any other country, when the patient is not a native of the country, and especially if he has not been long resident in it. The most extraordinary case I ever witnessed was that of a gentleman, a native of France, who, after a long exposure to contagion during the famine fever, contracted maculated typhus here. He was a man of a sanguineo-nervous temperament, and exhibited during his illness a succession of symptoms widely different from those which we commonly see in the spotted typhus of this country. He was profusely maculated, and the peculiarity of the case consisted in the irregular manifestations of various local symptoms—principally engaging the nervous system—and the inconstancy of the general condition, especially with reference to excitement or collapse. This gentleman happily recovered, after passing through a storm of disease such as I and his other attendant, Dr. O'Ferral, had never seen before.

Hardcastle is a young man who has been well educated, and he is evidently above the rank of the ordinary hospital patient. His symptoms have been, from an early period of the disease, alarming in the highest degree. You will seldom see a worse case of adynamic fever. We may safely say, that for the last fortnight, both by day and by night, there has been an uninterrupted struggle between medical art and the fell disease which is upon him. During that time he has been lying more like a decomposing corpse than a living man; but he has been kept from dying by the bold and constant exhibition of stimulants, by tonics, and by food.

Some of you may wonder why it is that we thus go on with the increasing exhibition of stimulants—the untiring efforts to support life—although for the last ten days, at least, we have been hourly expecting his death. The answer is, that we believe his disease to be one which may subside, sooner or later, under the law of periodic action. His recovery will then take place—not in consequence of the action of any specific which has the power of curing fever, but from causes the nature of which is hidden from us. We are like the defenders of a post attacked by a powerful enemy, but yet expecting succour, and we seek to hold the place until that succour arrives.

There are two points in this case worthy of notice. One is that the nervous system has been so little engaged. He has had occasionally a slight delirium, and latterly some agitation and slight subsultus tendinum; but though he generally appears sunk in stupor, it is not true coma, but rather the stupor of exhaustion, for, when you rouse him, his intelligence appears to be good. Is this escape of the brain to be looked on as favourable, or the contrary? According to an old and well-founded opinion, all anomalous circumstances in fever are to be feared. You know the aphorism, "*Pulsus, vultus, et urina bona: et æger moritur.*" This contains an important truth; but, in typhus, the want of nervous symptoms is in general favourable; for of the symptoms referrible to one of the three cavities, doubtless those indicating nervous lesion are the most formidable.

The second point to which I wish to direct your attention is, that, although this patient presents the symptoms of typhus so decidedly, he cannot be said to have any maculæ or petechiæ. In fact, his skin has been unaffected; there has been none of the so-called exanthematous eruption of typhus; and, even at this advanced period, the existence of petechiæ is so doubtful, that I would not say that he has

them. Yet, if ever a man had the *typhus gravior*, this man has it. His surface exhales the peculiar odour of typhus, strongly marked; he is prostrated to the last degree; he has been kept alive by the most powerful stimulation; he bas a feeble heart, and well-marked secondary affections of the intestinal and bronchial surfaces; his mouth is full of sordes; his tongue black, dry, and cracked; his breath fetid. The stethoscope indicates a general and severe bronchial affection, and there is a wasting diarrhœa.

I am not going to take up your time by a discussion as to the distinctive characters of typhus and typhoid fever. But it would be, I think, difficult even to the advocates of the distinction, to declare in which class this case should be placed. In this instance, as in most others, the settlement of the question is of little value; for, whether the disease be typhus or typhoid fever, the treatment should be no other than that which we have so far carried out. I may say this much, however, that the presence or absence of an early eruption having some similarity to an exanthem, or, again, the presence of petechiæ, appears to be insufficient to justify our drawing a strong line of distinction between these diseases. I would advise you to receive with more than caution the doctrine, that the early eruption in typhus is a true exanthem, and that its absence in any given case points out that the disease is not typhus, but typhoid fever.

Again, it is stated that the non-maculated fevers are often protracted and dangerous; so they are, but not so often as they are short and easily managed. And I have not seen that relief of organs in typhus, which some describe as the rule, when the eruption appears. How, then, are we to look on the eruption. Certainly not as a distinctive mark between two different diseases. Gentlemen, we know that typhus fever will run its course and destroy life, without the necessary production of any hitherto ascertained anatomical change. We know further, that in many cases local alterations are formed, but that there is the greatest inconstancy in different epidemics, and in different patients during the same epidemic, in the seat, amount, time of appearance, and results of these local changes. The cutaneous rash is plainly one of this group of secondary affections; and its absence or presence can no more be said to distinguish the disease, than the absence or presence of any other of these affections. I think we may admit that an early and florid eruption is often met with in typhus, which is well marked in other respects also; and again, that such cases generally require and bear stimulation.

To return to the case of Hardcastle. We observe that there has been as yet no tendency to the critical or periodical retrocession either

of the secondary diseases or of the general affection. The fourteenth day passed by without any crisis, or without any subsidence of the disease; the eighteenth day passed by; the twenty-first day has passed by; and he is now in the twenty-fourth day of this terrible disease, kept alive by the use of wine, administered every hour, and also by the free use of hot brandy punch. He presents an appearance to-day to which I wish specially to direct your attention. You may remember that Saturday last was the twenty-first day, and it was then reported to me that the patient was getting a bed-sore. Upon examining him, we found in the ordinary situation of bed-sores a blush of redness and a slight degree of œdema; but beyond that there was nothing remarkable. There was this point, however, which I observed at the time, although it was not until to-day that I thought it of importance, namely, that there was already a solution of continuity of the skin. Now, this is remarkable, and if such a case should occur to me again it would awaken my attention. In the ordinary cases of bed-sores we seldom see a solution of continuity of the skin at an early period; we see lividity, blackness if you will; but a solution of continuity of the skin before the ordinary appearances of mortification have occurred, is extremely rare.

In this patient, on Saturday, just at the very centre of the livid patch on the skin, there was a slight solution of continuity. During the evening the nurse observed that several dark-coloured vesicles or pustules were making their appearance on various parts of his body. Mr. Parr saw these on Sunday, and he found that between the shoulders there was an eruption of livid tumours, which appeared to be something between vesicles and pustules. To-day (Tuesday) such of you as saw the patient will not soon forget the extraordinary appearance of his back. I have been attending on fever in this hospital since 1827, and I never saw anything of this kind before.

Now, it is a very remarkable circumstance, that this eruption of gangrenous vesicles or pustules should have occurred upon the twenty-first day; and this case, as far as it goes, appears to strengthen an opinion, which I have long held—that we were in error in attributing what are termed bed-sores in fever, simply to mechanical causes. The general idea is, you know, that they are simply the result of pressure long continued on a particular part of the body, from the neglect of turning the patient in bed—of pressure combined with the effects of position. Now there can be no doubt that these are predisposing causes, but whether they are the sole and entire causes is another matter; and I am almost convinced that the bed-sore in fever is often one of the group of secondary affections analogous to the ulceration,

or the tumefaction and ulceration, of the glands of the intestine—or to the bronchial affection which occurs in the middle stages of the disease—or to the other secondary organic diseases of fever. And if analogous to them, it should be more or less observed to be under the law of periodicity; it should appear and disappear at a certain time, or, at least, exhibit a tendency to do so. We have observed this very curious fact. There are cases in which the system seems to be in such a state that bed-sores will form from the slightest possible causes—that is to say, whenever there is any irritation or pressure, no matter how slight, a bed-sore will form in any part of the body. Some years ago we had a patient in this hospital, who, after the twelfth day, showed this tendency. She had bed-sores on the nates, and one on each shoulder. Then the tendency to the multiplication of these sores increased, and every morning two or three new ones were discovered. Wherever there was the slightest possible pressure, we found a gangrenous spot—in the fold of the arm; in the fold of the pectoral muscle; where the mamma leant upon the arm; where the head leant upon the hand in sleep; where one leg lay on the other—the mark of a black hand was stamped upon the surface. In every possible position in which anything like pressure was made, or irritation excited, there were bed-sores; and this tendency went on day after day, up to a certain day, until there were about thirty sloughs in different parts of the body. From that day—I might say from an hour of that day—no more bed-sores formed, although the constitutional symptoms had not subsided. The patient then had to go through the process of throwing off all these sloughs, of granulation of the cavities from below, and of their cicatrization. She was kept lying on her face for upwards of a month, and finally recovered.

Now what I want to draw your attention to in the case of Hardcastle is, that this extraordinary eruption of gangrenous patches on his back is not of the nature of bed-sores in the ordinary sense of the word. These patches are not produced by pressure. We find them in great abundance in the hollow of the back, where pressure is relieved by the pelvis and by the shoulders. We find them in abundance in the interscapular region; but if we wanted additional proof it is this—that we find them on the anterior portion of the thorax. They came out as vesicles. These vesicles became hard at the top, then black, and soon the mass dropped out; and this patient's back is now as if you took a sharp gouge and punched out circular portions of the flesh in a vast number of spots. Now it can hardly be doubted that this singular appearance is an example of a secondary disease affecting the surface; and it is very remarkable that it should have appeared

on one of the critical days—upon the day when, in the ordinary course of fever, the disease should have subsided. It strengthens greatly the opinion, that not only is the general disease under the law of periodicity, but that the secondary alterations are so too.

As a general rule, gentlemen, in prognosis, the occurrence of any vesicular eruption whatsoever in fever is bad. We have in fever several forms of vesicular eruptions. But suppose you take a patient's hand to feel his pulse, on the eighth or tenth day of fever, when he is otherwise going on well, and you are surprised at seeing a vesicle upon his arm. Do not neglect this—do not overlook it. The mere circumstance of that solitary vesicle forming so silently, without any pain, without any notice, points out that there is mischief before you—that the case is likely to go wrong. It is a very important prognostic. Here we have on this patient an eruption of vesicles running rapidly to deep gangrenous destruction of the part, for some of the cavities formed by them are singularly deep, though circumscribed.

Now, suppose that in place of that disease attacking the skin, upon the fourteenth day, or whatever day you please, it should attack the intestine. Suppose that the typhous matter suddenly infiltrated a gland in the intestine, which should fall as suddenly to gangrene, and that there was a solution of continuity; you will at once see the progress of the worst form of the typhous secondary disease of the intestine. You may look on this man as at this moment turned inside out. On the surface of his skin you are able to learn the history of the worst form of the typhous ulceration of the intestine. This extraordinary condition of his surface no one will say is inflammation of his skin. Apply the same view, and will you say that the disease of the intestine is inflammation of that part? Certainly not.

Whether this man is to live, gentlemen, or to die, I believe none of us can venture to say. Of course the chances are enormously against him; but I have said that in the treatment of fever you are never to despair so long as the patient can swallow. So long as he is able to take nourishment, or to swallow wine, no matter how dreadful or apparently hopeless the symptoms may be, you are not to desert him, but—to use the phrase of our glorious sailors—you are to fight the ship while she swims. In a disease under the mysterious law of periodicity, every hour of compelled life is a clear gain. And, over and over again, you will find that your efforts will be crowned with success. You will see a patient lying with his back icy cold; you will see him pulseless—his lungs filled with secretion—his belly tympanitic—with dreadful diarrhœa—the lower extremities gangrenous—himself in a state of insensibility—and yet, even under these

circumstances, a recovery is possible. But that recovery can be effected only by the steadfast determination of the physician not to desert his post until the vital spark has actually fled; and, if you commit an error in holding on—in hoping against hope—at all events it is an error on the right side.

LECTURE XXIX.

STIMULANTS IN FEVER, *continued*—Case of Hardcastle, continued—Treatment by food and stimulants in extreme cases—Presence of cerebral symptoms to a great extent unfavourable to the exhibition of stimulants—Necessity for daily observation of the effects of the treatment in each case—Signs of disagreement of stimulants—*Routine* practice is in every instance to be deprecated—Fallacies of the numerical system in therapeutics—History of *routinism*—Its results—Description of routinism in the treatment of fever.

WITH reference to the case of Hardcastle, with which we were occupied at our last lecture, we may hope that the symptoms have at last yielded. The great interest of this case consists in its having been an example of a fever in which the patient was scarcely maculated, yet in which the stimulating treatment had to be pursued with an activity as great or greater than that which we are called on to employ in the worst cases of spotted typhus.

On looking over my notes I find that on his admission, which was on or about the seventh day, he had a few scattered maculæ on the abdomen, of a large size, and of a leaden gray colour. He then had diarrhœa, abdominal tenderness, and ileo-cæcal gurgling; and the sounds of the heart, though weak, preserved their natural mutual relations as to force and duration. Doubtless the patient at this period might have been well described as labouring under typhoid and not typhus fever, according to the distinctions now in vogue; but on the 14th, or the 21st, or the 24th day, he would be a bold man who would declare that the case was not typhus of the worst description.

He is now at the 28th or 30th day of his illness, and we have every reason to believe that all will now go well. Since the eruption of gangrenous vesicles or pustules, which occurred on the 21st day, there have been no new appearances of this form of disease, there has been no new bed-sore, nor have the gangrenous patches spread, as might have been expected; two of them are in the form of sinuous cavities, but even these show signs of healing.

These sores were treated first, you will remember, by the simple, and afterwards by the fermenting, poultice; but as the latter gave considerable pain, the nurse returned to the simple poulticing, and now we have changed our plan, and are using stimulating dressings to the ulcerated surfaces.

In the management of these sores, whether they be the ordinary bed-sores or examples of the gangrenous pustules, both of which appear to be of the nature of the secondary affections of typhus under the law of periodicity, it sometimes happens that we have to deal with extensive sinuses. I have seen them at times of not less than six inches in length. In most cases the best treatment for them will be stimulating injections, using the vulcanized India-rubber bottle with a long and slender ivory pipe. It is generally requisite at first to wash out the sinus with tepid water, and afterwards to inject some of the metallic solutions—diluted solutions of sulphate of copper, nitrate of silver, or sulphate of zinc—and when the discharge is very fetid, you may use the decoction of bark, or solutions of chloride of lime or soda. An excellent dressing when the sore is open is the Canada balsam combined with oil, or a mixture of equal parts of castor oil and balsam of copaiba. You will derive advantage, also, from the employment of pressure by means of flat compresses of lint, and a roller when it is possible to apply it, or in other cases you may employ strapping with adhesive plaster. When the sinus is in a depending position, and matter accumulates in its lower portions, it is sometimes necessary to make a counter opening; but this operation should rather be delayed until the system has improved; the case is then to be treated as an ordinary surgical one.

Now let me draw your attention to the diligence with which the administration of wine has been pursued in this case. We began its exhibition on the 2d of November, which was the eighth day of the disease; on that and the next four days, the quantity administered was six ounces daily. The wine used all through was port, of an excellent quality. From the 6th to the 11th he had twelve ounces daily, and from the 11th to the 18th his daily allowance was twenty-four ounces. During the next three days it was reduced to eighteen ounces; and from the 21st to the 25th, to twelve ounces per diem. On the 26th and succeeding days he had ten ounces; on the 28th the quantity was reduced to eight; on the 4th of December he had but four ounces; and the wine was omitted altogether on the 5th. Besides all this, a tumbler of hot brandy-punch, containing two ounces of the best brandy, was administered whenever the patient's state seemed to require it. In this way we used about twenty-four ounces