Lectures.

CASES ILLUSTRATING RARE COMPLICATIONS AND SEQUELÆ OF TYPHOID FEVER.

A CLINICAL LECTURE DELIVERED AT THE PENNSYLVANIA HOSPITAL, NOVEMBER 19, 1881.

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GENTLEMEN, I will to-day group together for you a series of cases of typhoid fever, which show a few rare complications and sequelæ. Perhaps some of the peculiarities of this affection may be best illustrated by the following specimens taken from a case that perished during the height of the disease:—

CLINICAL HISTORY AND MORBID ANATOMY OF TYPHOID; EXAMINATION OF THE HEART.

These specimens were taken from the body of a man who died in the wards a few days since of typhoid fever. His case was looked upon as hopeless from the beginning, for reasons which the autopsy has fully demonstrated to have been correct. His name was James Y., born in England, thirty-nine years of age; he was admitted into the hospital on the fourth of this month with diarrhœa. The record states that he had then been ill for nearly a month. He was a machinist, and had only been in this country a few months. At the beginning of his illness, it is said, that there had been no chill, the onset of the fever was gradual, but diarrhœa was a prominent symptom; he also had bilious vomiting, frequent epistaxis, and severe headache. Upon admission he had a dry cough, fever, and diarrhœa, his stools were thin, yellow, and frequent, so frequent that he had ten during the first day. From the first he had been troubled with a symptom which always makes one solicitous about a case,—he could not sleep; his temperature was 104.6° F.; the pulse was, however, only beating 80 in the minute; it was compressible and very weak. Upon examining his chest, we found slight dullness existing beneath the angle of each scapula. There was a good deal of hypostatic congestion in both lungs posteriorly, with coarse râles very generally distributed. But what struck us most forcibly, and what indeed made us think the case one of the greatest gravity, and most likely to prove fatal, was the state of the heart, the sounds were muffled, the first was only with difficulty detected; every now and then, about every second or third beat, there was a most marked intermission.

In consequence of his general condition and weak heart he was at once placed upon stimulants, at first wine, subsequently whiskey, gradually increased to twelve ounces in twenty-four hours, with four ounces of sherry wine. He was also steadily given strychnia, one sixtieth of a grain three times a day, in view of the fact that the great danger was going to be a failure in the action of the heart. This proved to be true; for while he remained weak, and was suffering with restlessness, delirium and tremor, the gravity of the symptoms was not so much due to the effect upon the nervous system of the typhoid fever poison, nor to the state of the bowels,—for the diarrhœa was readily kept in check with mineral acids and a little opium, in the form of suppositories,—as to the weak and irregular

action of the heart, which indicated grave disorder of the walls of the heart. Towards the end it became somewhat more regular, but it remained weak. I ought to state, also, that about five days before death there was a slight but not excessive epistaxis. The temperature all the time remained high, and on the day before death was 105° F. I will now invite your attention to the specimens.

Let us first confirm the diagnosis of typhoid fever by examining the intestines. Here is the cæcum, here the ileo-cæcal valve. These large ulcers in the wall of the ileum are remarkably fine specimens of the lesions of typhoid fever. Besides the great ulceration of Peyer's patches, these solitary follicles are in the same condition. Passing up the bowel, we find patches infiltrated, and with only superficial erosion, a condition not incompatible with recovery; others more affected are ready to slough away. The kidneys are large, somewhat fatty. There had been no albumen in the urine during life, and this fatty condition must be looked upon as due to a cause antecedent to the occurrence of the fever; it is not the form of renal degeneration which is often found in typhoid. Look at the spleen. As the intestinal ulcers were characteristic, so this spleen is characteristic. It is very large and full of blood, weighing twenty-five ounces; it constitutes a lesion almost as essential as that we have just seen in the bowel. This is the large dark spleen of typhoid fever, the currant-jelly spleen. The lungs show very marked evidence of hypostatic congestion at the postero-inferior portions, but there is no true pneumonia; the tissue crepitates, it is not infiltrated to the extent of consolidation, but simply engorged with blood, the congestion we recognized during life. The liver, also very large, weighs sixty-four ounces, at least fourteen ounces more than normal, it is dark-colored and exudes dark blood on section. The heart is fatty, the walls distinctly so. The leaflets of the tricuspid valve are healthy; those of the mitral valve are slightly thickened, especially at their free border, but were not sufficiently affected to permit mitral regurgitation during life. Now why did this man die? I believe it was from the fatty heart. Of course it was a bad case in itself, the temperature indicated that; it was, you recall the record, 104° F. to 105° F. The marked nervous symptoms also, which he presented,—the tremors, depression, and sinking down in bed, always indicate gravity; but with the condition of the heart these made the prognosis especially bad. There can be no reasonable doubt about one feature in the history, although the man was unable to give a full account of himself, yet the fact I refer to is confirmed by these appearances, the man had been very intemperate. The liver and kidneys show the intemperate habits of the individual. The same cause may have had much to do with the weakness of the heart, and the degenerative condition of its walls.

REMARKS ON SLOW PULSE IN TYPHOID.

Before passing to the next case I will make some remarks upon one of the prominent clinical features of the disease, which the case will bring to your mind—the slow pulse. I have said that the pulse was only eighty when he was admitted, although the temperature was 104.6° F. I have also told you that it was intermittent. Now, gentlemen, look at this disproportion between the pulse and temperature, 80 and 104° F. Is this a good or bad sign? It is a bad sign. A slow pulse is not of itself of grave import in typhoid fever,

¹ Reported for the Boston Medical and Surgical Journal.

for the case may be a very light one; but when the thermometer indicates a high temperature, then a slow pulse indicates danger. This is so true that when I find this disproportion existing between the pulse and temperature I know that I have so grave a case that in the vast majority of instances the patient will die. You may ask again, What is this slow pulse owing to? and why the irregular pulse? I attribute them in part to a peculiar influence of the typhoid fever poison; but largely to this, — it was acting upon a weak and fatty heart. It is a curious fact in fatty heart that in acute diseases, instead of becoming more frequent in its action, it becomes often slower. This is not an isolated case in my experience. I have known it to occur in pericarditis and other acute maladies. Therefore, a slow pulse in this case had to do with a condition of the heart which in itself is a cause of great danger.

But I should be giving you a wrong impression, if you have been led to infer, that in every case of slow heart, in typhoid fever, be it regular or irregular, this is the effect of a degeneration of that organ. That would be incorrect. I recall a case which I saw a few weeks ago, in a young man, too young to have fatty heart, where there was no question of intemperance, for he was perfectly free from bad habits; his pulse was 80, his temperature from 104° F. to 105° F., but the heart was not irregular as it was here. The slow pulse in the case I refer to was, therefore, not due to a fatty heart nor to any fault of the ventricular walls or valves, but to some peculiarity in the poison which prevented the heart from rising coincidentally with the temperature. The case, after a long and desperate illness, proved fatal. Whatever be the explanation, a slow pulse and a high temperature are among the most dangerous combinations of symptoms of typhoid fever.

You will also be interested to learn — and I will now only call your attention to the fact, intending to return to it — that this man had epistaxis again only a few days before his death. Another case will furnish me with a better illustration to speak of this symptom.

A CASE WITH RECURRING EPISTAXIS AND PAROTID SWELLING.

I shall now show you a case of typhoid fever with most unusual complications, and one in which I have instituted a treatment, which has been followed by considerable success. This man has been in the hospital for seventeen days. His name is Emil B., twenty-seven years of age, a cooper; he is a German. He came into the wards a very ill man, having been sick for four weeks before admission with diarrhoea and weakness. He had headache, with a furred tongue, and vomiting, and yellow conjunctivæ, indeed, there had been what is roughly and loosely sometimes called "a bilious complication" in the case, but this was all over before we saw him. He also had epistaxis, which from his history had been very free and frequently repeated; in truth it was stated that he bled at the nose every morning for a while.

Upon admission the man was found to have typhoid fever, he was very pale, weak, and feverish, the thermometer indicating 104° F., his pulse was 120 in the minute. He had frequent but not exhausting diarrhoea. He was so weak that we placed him promptly upon stimulants and quinine; and for the restlessness which he exhibited, he was ordered an ice-cap, to be kept upon his head. The looseness of the bowels was quite marked, but what is of more importance, he lost control

of his sphincters, and the copious frequent discharges were passed involuntarily so that it was difficult to ascertain the number of passages. Not to detail all the features of this grave case besides the frequent pulse, high temperature, and diarrhoea, I will say, in brief, that the looseness of the bowels was kept in check with opium, the restlessness was also relieved by this agent aided by the ice; and with steady nourishment, and twelve ounces of whiskey daily, the man rallied, and what seemed a very bad case soon showed great improvement. How bad a case it was you may judge from the temperature chart. Here it is: 104° F. the first night, 105° F. the next, then 103° F., and after that gradually declining to 101.5° F.; then, suddenly, up shoots the temperature again and becomes 104° F., and this rise, of which I am speaking, is found to be coincident with just the complication for which I wish to show you the case this morning. Look at it, or at least look at what remains to-day, for enough remains to identify it. See this dense parotid gland forming a considerable tumor on the left side at the angle of the jaw. This is a parotid swelling or a parotitis occurring as a complication of typhoid fever, and limited to one, for on the right side there has never been any such affection.

TREATMENT OF SWOLLEN PAROTID IN TYPHOID FEVER.

Now, gentlemen, this man, who was doing very well, when this swelling appeared seemed very ill, and the whole aspect of the case became more threatening; for this occurrence is one of considerable gravity. I will not dwell upon its pathology at present, but at once call your attention to the treatment instituted, a treatment which I have, in at least one case in this hospital, previously known to produce a remarkable result. It is the steady application of ice to the swollen gland. Mark you, the usual termination of this glandular inflammation in low fevers is profuse suppuration, long continued discharge of unhealthy pus, and a pyæmic condition; the state of the patient becoming more and more grave until he perishes from blood-poisoning or exhaustion. I have tried before now all methods of treatment, painting with iodine, the application of blisters, hot poultices, only to give them up as valueless. It then occurred to me that the steady local application of ice at the beginning might prevent this suppuration and the consequent exhaustion. We resorted to it as in the previous case, and the result was admirable. The swelling became less within twenty-four hours; the tenderness also was not so marked, the general condition much better. This was continued for several days with steady improvement. Yesterday, the resident physician, perhaps too soon, believing that the swelling was reduced and the inflammation over, suspended the ice treatment. Moreover, you observe that the temperature had gone down before that time from the effect of the ice, which acted as a general sedative. There was good reason then for interrupting the treatment, but what was the result? He has more swelling this morning. But we have not lost the good accomplished by the ice, merely the benefit of its continued use. There is no suppuration, the gland is hard, and tender, the surface red. I will resume the treatment, and unless I am very much mistaken, I shall be able to show you the case at our next meeting entirely free from this complication.

His pulse is now good, not over 100; his general

condition decidedly improved; the bowels are under control, but still require looking after; he is having three or four stools a day, when too frequent he is given an opium suppository from time to time; he has more strength than before; his tongue is cleaner; the mental condition has been improving. Therefore the group of symptoms which were at first so marked are now in abeyance. Notwithstanding that this glandular swelling is looked upon as a bad complication, I am disposed to continue his treatment for a few days longer, then if the condition is favorable I will abandon it, and apply iodine. He now is taking tincture of iron, twenty drops four times daily, and eight grains of quinine, twelve ounces of whiskey (half ounce every two hours in milk) through the day, keeping the bowels in check with a little opium by the mouth or in a suppository, given as may be necessary. The man made an excellent recovery. Towards the end a slight amount of purulent discharge was evacuated from above the angle of the jaw, where the ice had not been well applied.

The complication I have shown you here is one of the very rare ones in typhoid fever. I have seen it very often in what is called typho-malarial fever, — that is to say for the most part typhoid fever with malarial complications.

PATHOLOGY OF TYPHOID PAROTITIS.

I am speaking from a large experience with the disease when I say that it is also not uncommon in typhus, but in typhoid it belongs to the rarest of its complications. I have told you already that its tendency is to suppuration, which makes the condition of the patient much graver. But, gentlemen, unless the size of the swollen gland is reduced by resolution, it is better for it to suppurate than to remain enormously enlarged. I remember a case of typhus fever where it was necessary to resort to tracheotomy to prevent suffocation from the mechanical pressure exerted by the mass upon the trachea. If it be found impossible to prevent suppuration with ice, then the next best thing would be, I say, to encourage free discharge to prevent burrowing and pressure upon the air-passages. I have spoken of its rarity, now what is the cause of this complication? It is an expression of blood-poisoning. It belongs to certain low forms of fever in which the blood becomes profoundly altered, and the wonder is that it is not more frequent in typhoid fever than it is. It results, moreover, not only from a septicæmic condition, but also in the pyæmic state, which is more often seen in surgical than medical cases. In the latter condition it always indicates great gravity. I have not conversed with surgeons upon this ice treatment of gland swellings in pyæmia to prevent suppuration, but will suggest it, as it may prevent an additional drain upon the system. I believe it deserving of further trial.

SOME UNUSUAL SEQUELÆ OF TYPHOID.

We are dealing this morning with bad cases and rare complications. I now show you another typhoid fever patient, who has been very ill, and could not be brought into your presence before; he is now improving so that I can show him without any risk to himself. I will, however, proceed at once to examine him so as not to detain him in the clinic-room; I will then make some remarks upon the case.

His name is Martin M., twenty-one years of age, of Irish extraction. You see he is very pale, frightfully

anæmic; his mind is now perfectly clear; he passes out his tongue when told; it is not very much coated, you are, perhaps, struck more with its pallor than with anything else; his pulse is feeble, and beats 110 in the minute, it has been always about 120; his bowels are now regularly moved once a day, or sometimes only every second day; he has no tenderness in the iliac fossa nor indeed anywhere in the abdomen.

MILK LEG IN TYPHOID.

But now comes one of the symptoms which made this so serious a case, and of which you will see sufficient evidence remaining to identify the clinical history. He has had milk leg of very bad character, a phlegmasia alba dolens. Look at it. Although the leg is markedly diminished from what it was, you will still see that the right leg is considerably more swollen than the left. It has been still more swollen and very tender on pressure; the pain on pressure now has also subsided, except immediately along the course of the saphena vein, which is large and of cord-like density.

PURPURA DURING TYPHOID.

This swollen leg has been one of the symptoms from which this poor man has been suffering, now happily declining; it was associated for a time with considerable pain in the thigh and in the calf of the leg, but he also has had something else. Look at this left leg. Just above the ankle and on the dorsum of the foot see the large petechial spots, dark blotches, now only seen in this situation, but about a week ago they were all over the body, large purple and black spots in the skin, which have now almost all disappeared.

There is another point to which I will call your attention, and then will let him go out. In addition this man's life was almost ebbing away by profuse and repeated bleedings from the nose, so much so that the only means we could employ to stop them was plugging the nose, which finally arrested the hæmorrhage, which not only gushed from his nose but passed into the pharynx, and was swallowed, and afterwards vomited. This is a case of recurring epistaxis late in the disease. It was subsequent to these attacks of bleeding that these spots appeared all over the body, although a few had been observed before.

These are the principal features of the case. I will now only make an examination of his heart. I tell you that there is no valvular disease; the first sound is still feeble and laboring, the second is clear; a systolic blood murmur is heard at the right base as well as at the left, but more at the right. There is also a certain amount of bronchitis, for a number of mucous râles are heard in the lungs. This completes our examination of this unpromising case, and he can be removed to the ward.

TEMPERATURE RECORD DURING OCCURRENCE OF SEQUELÆ.

Let us now study his temperature record. His temperature this morning is normal. I will now show you some of the most interesting temperature sheets [Each sheet contains the record for four weeks. REP.] it is possible to see. Look at this last one, see the enormous variations during the last two weeks, now down to 98° F. then shooting up to 105° F. This is not the course of typhoid fever temperature. Look at it; it begins at the end of the second temperature

sheet, and here it is at its maximum. Now, the interesting part to us is that these temperature variations were accompanied by chills which were not influenced by quinine, and these temperature rises corresponded with attacks of epistaxis; during the last two instances this was noticed certainly.

This is not the temperature record of typhoid fever, certainly not the typical record of a man ill with typhoid, who has been in the hospital for eight weeks, and who has been sick at least nine weeks. It is, therefore, the record of these strange complications from which this unfortunate has been suffering. Milk leg, epistaxis, profound alterations in the blood, petechiæ, and chills, the latter uninfluenced by quinine. What does it mean? It means that this man has been pyæmic. There has been septicæmia, milk leg, finally a pyæmic condition of the blood induced by the phlebitis, as shown by these irregular chills.

REMARKS ON EPISTAXIS.

This altered condition of the blood, which gave rise to this marked anæmia, was also the cause of the recurring epistaxis. Now, late epistaxis in typhoid fever as compared with early epistaxis is relatively very rare; it almost never occurs, although you have seen in this clinic to-day two marked cases which apparently prove the contrary. In the other case the epistaxis occurred within two or three days before death, but in this man it came on in the seventh or eighth week, when his life was threatened by the petechiæ (purpura hæmorrhagica). Gentlemen, epistaxis, as the rule, is an early symptom of typhoid fever, occurring prior to the decided development of the fever, or in the first week. Here you have had an illustration of how it may happen as a late complication, but when late it is a most dangerous one.

The treatment for the epistaxis, ergot, iron, locally and internally, was unsuccessful, until we finally resorted to the plugging of the nostril.

BLOOD CHANGES IN LOW FEVERS.

Finally, before dismissing this much-complicated case, I must say a word about the petechiæ. Do petechiæ belong to the clinical history of typhoid fever? Gentlemen, you may pass through a lifetime without being able to duplicate this case. These extravasations you will see in typhus or in cerebro-spinal fever, but they are most rare in typhoid. They bespeak a condition of blood that is serious in its results, a state of dissolution to an extreme degree, occurring very late in the disease. I have seen this also in typhomalarial fever — which is still typhoid — as it occurred in the army in soldiers who had acquired the so-called Chickahominy fever; among those who were thus brought to Philadelphia I remember a number had petechiæ.

PROGNOSIS OF CASE.

These are some of the leading clinical features, complications, and sequelæ of typhoid fever under rare conditions. This man has passed through a severe ordeal, but I believe that he will rally, and if we can get his blood in better condition I think we may now look for recovery. His temperature is once more normal, the milk leg is passing away, the chills no longer occur, nor the attendant phenomena that bespeak a condition of pyæmia from which he was once laboring.

His treatment now is fifteen drops of the tincture of the chloride of iron, with five of muriatic acid, which,

formerly taken thrice daily, we will increase to four times a day. He also gets five grains of quinine each morning.

His chances are now fairly good; a week ago you would not have thought he had a chance. There were no difficulties of diagnosis here; the early symptoms of typhoid fever were marked, very marked; it was always a bad case. We found before the peculiar sequelæ appeared, that there had been also a strong history of syphilis, although there were not any strong syphilitic manifestations. I mention this because it belongs to the clinical history, not because it had any especial influence upon the course of the disease.

Original Articles.

MORAL INSANITY.¹

BY GEORGE F. JELLY, M. D.

MORAL insanity, that is, insanity in which the moral or affective qualities of the mind are chiefly involved, was first described by Dr. Prichard, but found its most earnest advocate in the late Dr. Ray, to whom, more than to any one else, is due its recognition at the present time by both the medical and the legal profession.

I think that every one has been tried and puzzled by patients afflicted with this form of mental disease, and has approached its study with many doubts; but by writers on insanity, with occasionally an exception, it is as fully recognized as is melancholia or general paralysis. Still, even now no medical man can feel free from anxiety when he endeavors to give a victim of moral insanity the benefit of his opinion in a criminal trial, or even to have such a person committed to an insane hospital, he or she often appearing so well and talking so plausibly that an ordinary examination may fail to convince either judge or jury, while at the same time to the family and intimate friends the patient may be a terror.

True moral insanity may be defined as a disorder of the moral or affective powers of the mind with little or no *apparent* intellectual disturbance.

I do not mean to deny that there often and perhaps always is some intellectual impairment in cases of this disease, but what I do mean is that in those which are typical it exists only to that extent that the patient would be practically sane if the moral faculties were not disordered, and did not overpower the intellectual. The control of the moral by the intellectual powers is one of relative, not absolute, power. While the moral faculties remain in their normal condition the power to control their manifestations by the intellect is clearly evident, but when they become diseased the latter is unable to perform its office. Its own power may not be diminished, but the power of the moral sentiments is unnaturally or immoderately increased by the influence or intrusion of the foreign element of disease. This relation between the intellectual and moral powers is such that to render an act insane it is not material whether the derangement is in one or the other. As in other forms of mental disease a derangement of the intellect may lead to outrageous and immoral acts, so in moral insanity the morbid moral influences may be so strong that the intellect cannot control or resist them, the individual at the same time fully understand-

¹ Read before the Boston Society for Medical Observation.