Clinical Lecture

ON THE

TREATMENT OF RHEUMATIC FEVER,

AND OF THE USE OF ALCOHOL IN SERIOUS CASES OF THIS DISEASE.

DELIVERED AT KING'S COLLEGE HOSPITAL,
WINTER SESSION, 1861-62.

BY

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Complicated Cases of Rheumatic Fever. Two Classes of Cases.

CASE I. *A girl aged 14. Several joints affected. Pericarditis with effusion. Pneumonia. Pulse 160; respiration 60. TREATMENT. Alkalies. Three grains of opium in twenty-four hours for eleven days. Strong mercurial ointment and opium applied over the heart. Ten ounces of brandy in twenty-four hours continued for eleven days. Convalescence three weeks after the disease was at its worst stage.*

CASE II. *A boy aged 16. Joint affection. Pericarditis with effusion. Slight pneumonia. Pulse 132; respiration 72. TREATMENT as in Case I, but less opium was given, and only four ounces of brandy in twenty-four hours. Convalescence a fortnight after the disease was at its worst.*

General remarks on the treatment pursued. On the propriety of giving stimulants in cases of acute rheumatism.

GENTLEMEN,—I propose to-day to offer some remarks on the treatment of rheumatic fever complicated with pericarditis. Of this disease, there have been recently several cases in the hospital; and, although I shall more especially direct your attention to a single case, many of the observations which I shall make will have reference to cases generally, as well as to this particular one. These complicated cases of rheumatic fever always give the physician much anxiety. They require very attentive watching, and, while the disease is at its worst, should be seen at intervals of not more than four hours. Much difference of opinion still exists among practitioners, as to the plan of treatment we should pursue in acute rheumatism complicated with pericarditis; but when we consider how very differently individuals are affected by the same morbid condition, you will not be surprised that the experience of different practitioners should lead them to form different, and sometimes opposite, conclusions. Cases of the same disease occurring in different classes of society in various parts of the country, or in the same part of the country at different periods of time, require very different plans of treatment. In deciding as to the course to be followed in any disease, and more especially in an acute malady, you must consider, not only the nature of the morbid action which you are called upon to treat, but you must reflect upon the whole state of the patient; you must try to ascertain in what manner the physical and chemical processes going on in his body are disturbed, and then consider if any interference on your part will restore healthy

action; or enable the patient to resist the tendency which some of these deranged processes have to destroy life rapidly, or to bring about an alteration in the structure of important organs, which will lead, sooner or later, to a fatal result.

In the London hospitals you have many opportunities of studying the course of serious cases of acute rheumatism. Let me recount very briefly some of the principal points met with in examples of the disease which more frequently come under our notice in the wards of this hospital.

The patients are very generally weak, ill-nourished, over-worked, and often under-fed, and insufficiently clad, unhealthy people. They are very pallid. The joint-affection varies much in intensity in different cases. There is generally free sweating, or this is easily induced. Pericarditis often comes on very early in the disease. The quantity of lymph effused on the surface of the pericardium is not very great; but there is a tendency to effusion of serum as well; and in many, effusion into the pleura also occurs. It is by no means uncommon to find small patches of solid lung; but the pneumonia generally affects the surface of the lung, and is not extensive. Often the inflammation resolves and recurs in different parts of the lung from day to day. The prostration of strength is considerable, and the pulse is, of course, very quick, and generally weak. If delirium occurs, it depends on exhaustion, and usually ceases after the administration of stimulants. In many cases, we have reason to believe that the occurrence of delirium is prevented by the timely administration of support and stimulants. These cases do well on a supporting plan of treatment, combined with the administration of alkalies and opium, which latter drug may be given in comparatively large doses frequently repeated without exerting its ordinary action on the system.

Another class of cases, also complicated with pericarditis and pneumonia, is met with; but examples of it are seldom seen in large towns; and in the course of twelve years, I do not remember to have seen more than two or three instances in the wards of our hospital. The patients are comparatively strong, well-nourished, and sometimes florid people. The skin is dry. Fever runs high. The pulse is quick and bounding. The delirium is violent. The quantity of lymph in the pericardium is often enormous; and I believe death may result from the interference with the heart's action thus produced, and the congestion of the lungs which results. I have had very little experience in the treatment of these cases; but I have seen alkalies, various sudorifics, opium, and support employed in vain. If I were called upon to treat one of these cases now, I would certainly take blood, partly with the view of relieving the congestion of the internal organs, but mainly in the hope of favouring sweating and the action of the kidneys. In fact, in such a case, I believe the right plan of treatment would be to attempt to modify the changes in such a manner as to reduce it to the character of the cases first alluded to.

In the present lecture, I propose to confine my remarks on treatment to the first class of cases. Several of these are admitted into our wards every session; and those of you who practise hereafter in large towns will, no doubt, be called upon to treat such cases frequently. They occur among the

better class of persons as well as among the poor. Children, students, and young people of both sexes, are principally the subjects of these attacks; but the disease is not exclusively confined to children and persons under thirty or forty years of age.

The question of treatment is very important; and unless you are well acquainted with the course of these cases, and know the probable and possible complications which you may have to treat, and are familiar with the earliest symptoms of these complications, you cannot undertake such a case with justice to the patient, or satisfaction to yourself. Fortunately, the symptoms indicative of serious morbid changes are well marked; and, after having carefully watched two or three of these cases, you will ever after be on your guard, and will not fail to note the earliest symptoms of the heart or lungs being attacked, and modify your treatment accordingly. The *immediate* danger in such cases results from the great liability to acute inflammation of the pericardium, the pleura, and the lungs; but, -upposing the patient to recover from the attack, he may not be as healthy as before, for in too many instances the pericarditis is followed by an alteration in the condition of the valves of the heart. Regurgitant disease of the mitral orifice very commonly results. I have, however, known some instances in which this affection hardly seems to have influenced the duration of life. But among the poor, and people who are compelled to work hard, so that the gradual accommodation which naturally takes place, under the altered condition of the heart's action, in the organs of respiration and circulation is interfered with, you generally find that the breathing becomes permanently affected; enlargement of the right side of the heart, with weakening of the right ventricle, results; and attacks of general dropsy add to the patient's distress. The case often terminates fatally a few years after the heart affection began.

CASE I. The patient is a girl in the Twining Ward. I. D., age 14. (Vol. iii, p. 22.) We learn, from the history taken by Mr. Tyrrell, my clinical clerk, that this child has had two previous attacks of rheumatic fever, one five years ago, and another two years since. There is reason for believing that the heart was not affected in either of these attacks. It appears that, about ten days before her admission, this poor child was cruelly turned out of doors, and compelled to sleep in the open air, in wet clothes. We shall not feel surprised that a third and very severe attack of rheumatic fever was the consequence. In a few days, she was seized with violent pain in the large joints, especially the knees, wrists, and ankles of both sides. To aggravate her sufferings, there was a sore over the sacrum, and considerable vaginal discharge.

On October 3rd, the morning after her admission into the hospital, she was very restless, and had scarcely slept at all during the night. The pain in the joints was severe. She was perspiring freely. The heart's action was regular. No bruit was audible; but we detected a faint rub at the apex of the heart. Pulse 124; respiration 36. She was ordered 20 grains of bicarbonate of potash, with 5 grains of nitre in water, every four hours, and 10 grains of Dover's powder at bedtime; milk diet; two pints of beef-tea; and two eggs. The affected joints were wrapped up in cotton wool, and a linseed meal poultice applied over the heart.

On the following day, the rub was less distinct. She appeared weaker. Pulse 104; respiration 27. An ounce of brandy was ordered to be given during the twenty-four hours.

On the 5th (three days after admission), bronchial breathing, with slight crepitation, was heard over the spine of each scapula; but there was no marked dulness. The restlessness and distress were so great that I thought it well to give 5 grains of Dover's powder every four hours, and the following day the brandy was increased to two ounces. Pulse 120; respiration 40.

No marked change occurred during the next two or three days, but the patient was more exhausted.

On the 10th (seven days after admission), the brandy was increased to 5 ounces, and chloric ether was added to the mixture. The rubbing sound was no longer audible.

On the 12th (ten days after admission), the cardiac dulness extended to an inch and a half to the right of the sternum. The child was much prostrated. Her face and lips were very pale. Respiration difficult and catching, and she could only utter two or three words at a time. The surface of the chest was so tender that it was not possible to make a very minute examination. Pulse 160, very feeble; respiration 60. The heart sounds were not clear, but appeared distant and feeble. The impulse caused a fluttering undulatory movement in the intercostal spaces lying over the heart. There could, therefore, be no doubt that effusion had taken place; but there was no evidence that the pericardium was distended to any very great extent.

The case was now serious, and might have terminated fatally within twenty-four hours; in which case, the pulse would have become quicker, and then fluttering; delirium would have appeared; the effusion in the pericardium would have increased, and perhaps fluid would also have been poured out in the pleura; the respiration would have become gasping; the temperature of the body would have fallen; a profuse perspiration would have broken out all over the body; and the distress which had been so painful throughout the disease would gradually have given place to comparative ease some time before life ceased.

How were we to endeavour to avert this result? It has been shown most conclusively that the tendency to effusion into serous cavities increases as the patient becomes exhausted. No treatment whatever could have caused the rapid absorption of the fluid already poured out; and, even supposing that any plan of treatment would certainly promote absorption of the lymph on the surface of the pericardium, and the fluid in its cavity, it was useless to think of resorting to such a course, because it was quite clear that any remedies to be useful must produce an immediate effect, not upon the fluid poured out, but upon the general state of the patient. In the present case, the quantity of lymph in the pericardium was not sufficient to cause us any anxiety. But, at the same time, we were anxious to guard against any increase in the effusion already poured out. Our first effort was to try to keep the patient alive. Her stomach digested. There was no retching nor vomiting; but the exhaustion was considerable. The effusion in the pericardium was affecting the heart's action; and delirium, caused by an insufficient supply of blood to the brain, and poor blood too, was coming on.

The treatment was modified as follows; and in these cases I always pursue a similar plan, modifying it in special details according to circumstances.

The quantity of brandy was doubled, that is, increased to ten ounces in the twenty-four hours. An ointment, consisting of strong mercurial ointment

and powdered opium, in the proportion of one drachm of the former to ten grains of the latter, was smeared on lint, and kept applied over the heart. In other respects, the treatment remained the same. Although I believe there is no conclusive evidence that mercury administered internally exerts any decided influence in promoting the absorption of the lymph and fluid in the pericardium, I am sure I have seen benefit result from the external application of the above ointment. But I confess I am not able to express a positive opinion as to the exact amount of beneficial influence to be attributed to the mercury or opium in the above-mentioned ointment. It is a remedy in which several good practitioners have confidence; and one which I feel sure has been of service in the several cases in which I have employed it, and I, therefore, continue to use it.

On the following day, there was less distress, and the respiration had fallen to 48, but the pulse still remained at 160.

On the 15th, the pulse and respiration had fallen to 144 and 44 respectively; and in another twenty-four hours the pulse had further diminished to 120.

A manifest improvement had occurred in every symptom; and it was quite evident to every one that the case was progressing most favourably.

In four days from the commencement of this treatment, the pulse had fallen from 160 to 120, and the respiration from 60 to 44, and this improvement had occurred while the patient was taking ten ounces of brandy and three grains of opium during each period of twenty-four hours.

At this date (Oct. 17), we thought we could detect a faint bruit at the apex of the heart; but on the following day, a mitral bellows sound was distinctly audible.

In spite of the quantity of support this child was taking, she was very weak. The skin of the chest was covered with sudamina, and she was becoming extremely emaciated. The bicarbonate of potass and nitre were changed for chloric ether and ammonia as the pain in the joints had disappeared, and the quantity of opium was reduced.

On the 23rd, the patient had so far improved that we determined to decrease the quantity of brandy. She had no pain, and seemed perfectly contented. She slept well. Her tongue was becoming clean; and the sore over the sacrum was healing fast.

From this time, she progressed favourably; the brandy was further diminished to two ounces in the twenty-four hours; and a few days after this, it might fairly be said that she was convalescent.

Now, I think, in this case, we must admit that there is no evidence that the brandy did harm. It did not irritate the stomach. It did not increase the urgency of the symptoms; neither did it increase the frequency of the pulse or respiration, or exert any effect on the mental faculties. On the other hand, it was certain that the general condition of the child considerably improved within twenty-four hours after the brandy was increased to ten ounces in the twenty-four hours.

It is true, that we have no direct means of proving incontestably that this child would not have done equally well on other plans of treatment; neither, on the other hand, can it be shown that the child would not have succumbed within twenty-four hours had the alcohol been withheld. We labour under similar difficulties in judging of the results of every plan of treatment; and it is only by carefully watching the phenomena occurring in several cases that you will be able to arrive at a conclusion; and,

even after extended experience, you will probably feel somewhat disappointed at not being able to prove to demonstration what you have ample reason for believing to be true. So long as the actual results of a given plan of treatment cannot be positively predicated, it must follow that the same evidence which seems positively conclusive to one who has observed the facts on which it is based, will fail to convince others who have not had an opportunity of observing the facts for themselves. Patient personal observation will alone enable us to practise with any confidence.

In the present case, the brandy certainly did not produce the effects which would have occurred had the child been in an average state of health. Nay, although half a bottle of brandy in the twenty-four hours was taken by this girl for several days, not the least tendency to anything like intoxication was observed during any part of this time.

Is it, then, reasonable to infer that a remedy which affects a healthy person in a certain characteristic manner, but which exerts no such influence in a case of disease, is therefore impotent? If so, opium is impotent, and tartar emetic is impotent. This child was taking during each twenty-four hours three grains of opium, and we know that in health half this quantity would have produced very sound sleep and contraction of the pupils, and, most probably, still more decided indications of the action of the drug would have been observed. Our patient never slept for two hours consecutively. The pupils were widely dilated during the whole time. There was no headache, and every now and then there was great restlessness, which, however, was always lessened after each dose of opium. Although you would not have known, from any symptoms, that the patient was taking opium, will you say that the opium did nothing? Does not this show that in this case there was a wonderful tolerance of the drug? and, knowing the effects of opium on the healthy organism, do you not feel quite satisfied that this patient was benefited by these frequently repeated doses? You know there would have been more distress, and you know that the girl would not have been as favourably placed had she not taken the drug as she was. So, also, there was a wonderful tolerance of the brandy; and anyone who has watched the course of such cases knows well that, when the pulse reaches 160 and the breathing 60, or before this, delirium is very liable to occur. This delirium results from exhaustion. Stimulants seem to prevent the accession of delirium in such cases; and, if it has already occurred, it often passes off after a few doses have been administered, and, at the same time, the pulse diminishes in frequency and increases in force.

He must be more than sceptical who would conclude that ten ounces of brandy, three grains of opium, chloric ether and sal volatile, two pints of beef-tea and two eggs, had nothing whatever to do with the progressive improvement you observed. The rapid emaciation which has occurred in spite of all this sustenance is surely conclusive against the argument that the sustenance did nothing—that it did neither good nor harm; for it is unreasonable to assume that the nutrition of the body and the strength would have remained the same without it.

[To be continued.]