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CLINICAL LECTURES

DELIVERED AT

UNIVERSITY COLLEGE HOSPITAL.

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LECTURE III.

Rheumatism with pericarditis—Diagnosis between hypertrophy of the heart and effusion into the pericardium—Importance of examining the heart in all cases of rheumatism—Tendency to pericarditis to produce hypertrophy—Convulsive movements attending rheumatism—Treatment by calomel, muriate of morphia, and venesection—Disappearance of the friction sound.

Sarah Fairbanks, admitted Friday, November 18, 1842, under Dr. Taylor; of ordinary conformation, phlegmatic temperament, pale tallowy complexion, single, exposed, by her occupation as a bar-maid at an hotel, to changes of temperature. Her mother is living, and in the enjoyment of good health; her father died at the age of thirty, from phthisis; she is liable to no particular disease, and is habitually strong; never had rheumatism before. Six weeks ago she felt very poorly, complaining of pain throughout her body, with feverishness, and was then confined to her bed for three days, since which time she has suffered pain in her ankles. She can trace the attack to no other cause than being exposed to draughts, while standing in the bar. On Wednesday last her knee became very painful, so as to be unable to move it. At present there is swelling of the right knee, from some effusion into the capsule, and indistinct fluctuation, with tenderness, but without redness; the right foot is swollen, with tenderness of the ankle and redness about the dorsum of the foot; she has had pain in the arms, but has none at present; pains worse at night, but not much changed by heat or cold; has had no shivering; skin is rather hot; appetite impaired; pulse 108, and small; tongue covered with a thick, whitish fur; there is a bellows murmur at the base of the heart, with the first sound, heard also at the apex, but not so distinctly heard at the top of the sternum, and is indistinct or doubtful in the neck; urine is turbid, acid, with an abundant pale pink sediment, specific gravity 1025, not albuminous, the pink sediment redissolved by a moderate heat; catamenia appeared last week. She was ordered—

Acetous extract of colchicum, three grains;

Extract of aconite, a grain and a half. In a pill.

To be taken three times a-day.

Low diet.

Nov. 22. Great catching in both arms; brief spasmodic twitches or contractions of arms, forearms, and hands; the left ankle is much swelled; extreme tenderness at the lower part of the dorsal region. Omit the colchicum and aconite, and take—

Calomel, two grains;

Muriate of morphia, half a grain. Three times a-day.

23. Both ankles much swelled, but no redness; left knee more painful and more swelled, but no redness; right knee more painful and more swelled; distinct fluctuation; no catching in the arms to-day, but pain in them.

Physical Signs.—Dulness over a great extent of the chest; the dulness over the cardiac region extends over twice the ordinary space, it extends to the upper margin of the third rib; there is a morbid sound with the first sound of the heart, heard also with the second; the sound is heard most distinctly at the base of the heart, very distinctly at the top of the sternum, not audible in the neck; the impulse is scarcely increased, but more frequent than natural; pulse 128, small and soft, it is uncertain whether there is pain in the mammary region or not; respiration is loud under both clavicles; it is audible to the bottom of the chest behind; scarcely any difference on percussion behind; morbid sound at the base; is rough and short. To be cupped over the region of the heart to ten ounces.

25. The small joints of both hands are swelled; they are also red and tender; the ankles are better, not being red, and scarcely tender; there is superficial tenderness of the right side of the abdomen, and of the lower part of the chest; the morbid sound continues at the top of the sternum, but is heard chiefly with the first sound of the heart; it gets less and less on approaching the apex, and is barely heard there; percussion quite dull at the upper margin of the third rib; between that and the clavicle on the left side there is dulness, but less so than at the third rib; respiration is loud; pulse 116, and feeble; no catching of the hands or arms to-day; tongue thickly furred. To be bled from the arms to twelve ounces; the pills to be taken every four hours.

26. Blood buffed; redness of the wrists is less; pulse 120, fuller than it was, soft, and rather jerking; the murmur at the base of the heart is the same as before, or louder; it is more distinctly heard at the apex to-day; gums are not tender; tongue furred. To be bled to twelve ounces; increase the dose of the calomel to three grains.

30. Pulse 104, soft, tolerably full; murmur loudest at the second rib on the left side of the sternum, diminishes at the distance of half an inch; the murmur very indistinct, if heard at all, in the neck; pulse 108; she is much purged, having eight or nine motions in the day; this purging came on yesterday. She was ordered—

Chalk mixture, six ounces;

Powdered kino, two drachms. Three tablespoonfuls to be taken after each fluid evacuation.

Dec. 3. She is very ill to-day, almost constantly

vomiting, with the purging undiminished. Omit the mixture.

Carbonate of soda, ten grains;
Diluted hydrocyanic acid, five minims;
Water, one ounce. To be taken frequently in a state of effervescence, with eight grains of tartaric acid dissolved in one ounce of water.

5. She is better to-day; the murmur at the base of the heart is loud as ever; there is a venous murmur in the neck, but none in the arteries; she is not purged to-day; nor is she sick; pulse 96.

7. Somewhat improved; murmur over upper part of sternum not quite so loud.

9. No murmur heard in the neck, or at the apex of the heart, that over the second rib much less loud and rough, but it varies somewhat; heart's action less frequent; pulse 92, slightly jerking; all pain has ceased. To have an aperient draught, to be taken directly.

12. Murmur over the second rib much diminished; pulse 90, less jerking; tongue covered with a yellow fur; bowels open. The aperient draught to be repeated.

13. The murmur was distinctly heard yesterday over the second rib, but cannot distinguish it to-day.

14. No murmur can be heard to-day; the second sound of the heart louder than the first; pulse 80, less jerking, soft; no pain in any part. Omit the mixture of hydrocyanic acid and carbonate of soda.

Iodide of potassium, four grains;
Peppermint water, one ounce and a half. A draught to be taken three times a-day.

Middle diet.

15. A slight murmur heard over the second rib; no pain in any part; pulse 90, still jerking.

19. No pain; feels stronger; a trifling murmur still continues at the base of the heart, heard only over a very small space; pulse 84, regular. To have full diet.

23. Murmur scarcely audible.

24. Murmur at the base of the heart has ceased. Discharged cured.

In lecturing on this case, Dr. Taylor made the following among other remarks:—

Diagnosis.—This was a case of acute rheumatism with heart symptoms. On Wednesday previous to the Friday on which she was admitted, the knee became painful and tender, but without redness; there was also pain in the arms; the pain, although worse at night, was not affected by heat or cold; the pulse was 108; the urine turbid, and depositing the pale pink sediment, consisting of the lithates, which is its common character in rheumatism; the specific gravity also of the urine was high, in consequence of the large quantity of solid matter it contained. There could be no doubt, therefore, of the nature of the disease, and the effusion into the joints was noticed which generally takes place in acute cases.

There were, besides, signs indicating disease of the heart; there was a morbid sound with the first sound heard at the base, less distinct at the apex, very distinct at the top of the sternum, doubtful if heard in the neck; the impulse of the heart was not increased, but there was dulness on percussion over a considerable extent—as high as the upper margin of the third rib. I concluded that the case was one of pericardi-

itis, and not of valvular disease. This was not easy to determine from the mere sound, as the bellows murmur and the friction sound caused by pericarditis so closely resemble each other; but there is this distinction, that the morbid sound, although distinct at the top of the sternum, was not heard in the neck; now, if valvular, it was in the aortic valves, and would have been heard there. This was the only distinguishing character at the commencement, but this diagnosis would be confirmed in the progress of the cure if the sound disappeared. These circumstances I stated at the bed-side.

The heart was hypertrophied, but there was, probably, no effusion of lymph into the pericardium to any amount; this was shown by the dulness not extending higher than the third rib, whereas in serous effusion there is dulness as high as the second rib, or even to the clavicle. Every one has noticed the anatomical fact that the heart, when enlarged, increases in diameter transversely, but even in very great hypertrophy the dulness never extends higher than the upper margin of the third rib. It is necessary, however, to be certain in making this distinction, that the lung is quite healthy, any condensation of the summit of which would, of course, increase the extent of dulness. In addition, it is necessary to bear in mind that the dulness might arise from aneurysm.

The pericarditis was probably circumscribed, for the friction sound could only be heard over a small extent, and this agrees with what we see in many cases on examination after death, in which lymph is found deposited in patches. In this case, as in many others, there was no metastitis, the rheumatism continuing after pericarditis had supervened; the pericarditis, also, was unattended by pain in the region of the heart; this is common even in more severe cases, and shows the necessity of examining the heart in all cases of rheumatism, whether pain is complained of or not. We may suppose the heart to have been hypertrophied before the attack, or to have enlarged in consequence of the quantity of blood determined to it, the experiment of Piörriy proves the latter to be a probable cause of hypertrophy; he found, on injecting fluid into the coronary arteries, that the heart was much increased in size, and, on opening it, that none of the fluid has passed into the cavities, the whole having been employed in producing the enlargement which had taken place.

According to the report we find that the morbid sound gradually disappeared, proving, as I remarked such a result would, that the sound was owing to the deposition of lymph, and not to valvular disease.

Besides the pericarditis there was another complication. It was observed, on the 22nd of November, that she had convulsive twitches of the arm and hand, accompanied with pain. This has been observed by Dr. Bright, and since by others, as occasionally occurring in cases of rheumatism, and he considers it to be a sympathetic affection and to resemble chorea, or it might be a rheumatic affection of the spinal chord; but there was no other proof of any affection of the chord, no pain or tenderness in the cervical region; it appeared, therefore, more likely, as supposed by Dr. Bright, to be a reflex movement transmitted from the excited nerves of the heart to the muscles of the upper extremities; for the patient was

possessed of great nervous susceptibility; there was tenderness of the lower dorsal region, and corresponding superficial tenderness of the abdomen and lower part of the chest. These movements were several times observed, and continued for two or three days.

Cause.—It appears that she was exposed to draughts in her occupation as bar-maid, but this cause was habitual, whereas the rheumatism was recent; there must have been, therefore, some recent predisposition or some other cause.

Treatment.—She was ordered the acetous extract of colchicum and extract of aconite three times a-day. This was continued for two or three days; but, not being much relieved, it was omitted, and two grains of calomel with half a grain of morphia directed to be taken three times a-day. On account of the pericarditis she was cupped over the region of the heart, and bled three times, the blood proving both buffed and cupped. On account of severe purging, and the mouth having become a little sore, the calomel and opium was omitted, and she took for a time the iodide of potassium. Under this treatment the murmur became less and less audible, and, at the time of her discharge, had entirely ceased. There was a venous murmur heard in the neck, as is very common during the treatment of acute diseases, and in this case evidently arose from weakness.

Bronchitis—Emphysema pulmonum—Lobular pneumonia—Morbus cordis—Death—Autopsy—State of the organs examined in relation to the symptoms—Lobular pneumonia usually a secondary affection—Foramen ovale open—Evidence of great congestion.

John Martindale, aged twenty-four, admitted on Monday, March 6, 1843, under Dr. Taylor; a man of stout conformation, by trade a dustman; habits unknown. It appears, from the imperfect account which could be gathered from his friends, that he has been subject for the last twelve months to a cough, but has never been entirely laid up. On Wednesday last his cough and breathing were worse, and he came home and went to bed in very low spirits, saying he knew he should not get better. His mother-in-law stated that he had no advice or medicine before his admission. His flesh was not wasted, and this was the first severe attack he had ever had. His father died of rupture of a blood-vessel; his mother of a cough, and chest symptoms. Both were subject to coughs.

Present Symptoms.—On admission his feet and hands were cold, surface moderately warm and moist, lips and countenance livid; was lying on his left side; his intellect was clear; he was thirsty, and very much exhausted; indeed, so much so that a question had to be put to him frequently twice before any answer could be obtained; his respirations were frequent, his voice feeble, and a little short cough.

Physical Signs.—Exhaustion prevented much examination of his chest, but there was found on both sides, behind and low down, a large muco-crepitant ronchus; in front and at the right side low down there was fine crepitation; on the left side, under the clavicle, there was also large muco-crepitant ronchus, and sibilant and sonorous ronchi were heard wherever the chest was examined; the lower part of

the right side was less resonant on percussion than natural; expectoration was not abundant; what there was was thick, yellow, and puriform; his pulse was 130, small and feeble; tongue was dry; he made water freely; bowels open.

A few ounces of blood were taken by cupping from between the shoulders about four o'clock in the afternoon, and the pulse became fuller, and increased in frequency about six beats. The cupping was continued to six ounces, and the pulse began to assume its former character. The patient felt relieved by the loss of blood, and his voice became stronger.

Tartar emetic, one-fourth of a grain;

Camphor mixture, one ounce and a half. To be taken every four hours.

A blister was applied to the chest, and a bottle of warm water put to his feet, which were cold. At nine in the evening he still continued in the same state, and as the tartar emetic did not make him sick, it was ordered to be given every two hours. During the night he retched several times, but brought nothing off his stomach; towards the morning he gradually got worse, and died about nine o'clock.

Autopsy.

On opening the body, both lungs were found adhering to the walls of the chest in many places; some of these adhesions were more fragile than others, but neither the old nor the apparently more recent adhesions were confined to any one spot, except perhaps at the back part of the lower lobe of the left lung, where they were firmer and stronger than elsewhere.

Right Lung.—There was some vesicular emphysema at the summit of the upper, and also some on the middle lobe; there was also some sanguineous effusion under the pleura on the lower lobe, and some emphysema at the margins; some of the vesicles were as large as pin's heads, and these very large ones were much more abundant on the upper and middle lobes; when cut into, the lung was very pale and bloodless, as well as on the surface; redness was almost absent in the small tubes, and but little was visible in the large ones. Weight, one pound two ounces.

The *left lung* is emphysematous on the margins and at the summit; old and firm adhesions also exist on the surface of the lower lobe; it is also diminished in volume, and tough; the upper lobe is of a flesh-red color, more dense than natural, does not crepitate on pressure, and sinks in water; two inches of its summit are hepatized; the rest is everywhere paler than it should be, and emphysematous; the bronchial tubes are thicker in the upper lobe of the left lung than they should be. Weight, fourteen ounces.

Heart is large; the pericardium transparent; there is a large black coagulum in the left auricle, and some black imperfectly coagulated blood in the right ventricle; a little coagulum also in the left ventricle; the walls of this cavity are thick and firm, rather pale, cavity of ordinary size, lining membrane healthy; the mitral opening natural in size; aortic valves healthy, and a few opaque spots are found on the lining membrane of this vessel; the foramen ovale is open obliquely about a line and a half; the walls of the right ventricle are hypertrophied; the substance is firm, and larger than the left; the hypertrophy and dilatation which exist are both more marked at the base than the apex; the sigmoid valves are healthy;

the right auricle is hypertrophied and dilated; the orifice is about the natural size. Weight, eleven ounces.

Kidneys are both alike; their color dark, and tissue firm; full sized. Weight of right, five ounces; left, six ounces.

Spleen large and dark. Weight, six ounces and a half.

Liver full sized, of a dark color, and firm; its texture contained much blood. Weight, three pounds fourteen ounces.

Brain externally congested; firm. Weight, two pounds nine ounces.

The *intestines* were not examined, but their external surface was dark and much congested.

Symptoms and Diagnosis.—It appears that the patient had been subject to dyspnoea for the last twelve months, and a few days before his admission the cough and dyspnoea increased, and he went to bed declaring that he should die. When he was admitted he was almost in a moribund condition; the dyspnoea was very great; pulse was very small and weak; there was large muco-crepitant ronchus heard on both sides of the chest posteriorly, and sonorous and sibilant ronchi wherever the chest was examined. He was cupped, and a few doses of tartar emetic given, but he died the day after he was admitted. The case was evidently one of chronic bronchitis and emphysema, to which an acute attack was super-added, of which the patient, having no medical assistance, died in less than six days from the commencement.

Morbid Appearances.—On examination after death, old adhesions were found on both sides of the chest, and there was vesicular emphysema in various places in both lungs, but the volume of the lungs was not much increased or diminished. The air cells were very much increased in size, and the lungs, when cut into, were paler than natural, owing to the blood being mechanically excluded by the pressure of the air contained in the dilated cells.

The bronchial tubes were found to contain a quantity of bloody mucus, but the mucous membrane was neither reddened nor thickened; and this absence of any sign of inflammation in the mucous membrane I have constantly found to be the case in numerous instances, on examination of persons who had been during life the subjects of bronchitis.

The bronchial tubes were very much thickened, and the cartilage increased, which caused the calibre of the tubes to be greater than natural. Over the surface of the left lung were scattered spots slightly elevated, each about the size of a nut, red, dense, firm, not crepitating, sinking in water, and presenting all the characters of hepatisation. This condition of the lung has been called lobular pneumonia; it is most frequently found in children, occurring in conjunction with bronchitis; in adults it is usually a secondary affection, either supervening on some acute disease, or on bronchitis, as in this case.

The left ventricle of the heart was both dilated and enlarged, the right also dilated; the amount of hypertrophy was shown by the weight of the heart, which was eleven ounces, the average weight being not more than nine ounces. The dilatation of the right ventricle might be easily accounted for; it most probably

depended upon the disease of the lungs, which caused the blood to accumulate in the right ventricle, in consequence of the obstruction to its passage, which existed in the lungs. For the hypertrophy of the left side of the heart there was no obvious cause; there were no traces of pericarditis, endocarditis, or disease of the valves, tending to show that inflammation had formerly existed, and had given rise to the hypertrophy.

The foramen ovale was open in this case, as it is in many others—a fact of no importance, as, in consequence of the obliquity of the opening, it would be closed during the systole of the heart.

The liver, spleen, kidneys, veins of the stomach and intestines, were found in a state of great congestion; the veins, also, of the brain in a similar condition; this is what we should expect to find in cases of obstructed circulation.

ALLEGED POISONING BY OPIUM.

TO THE EDITORS OF THE PROVINCIAL MEDICAL JOURNAL.

GENTLEMEN,—When a professional man's character is traduced, or his reputation vilified, I am sure you will not require any apology for sending a second letter on the subject; if you did, I would quote Shakspeare, "Who steals my purse," &c.; but that is unnecessary.

After reading a second time the account given in the Provincial Journal of an inquest in the neighbourhood of Clare-market, I feel more fully convinced of the great extent of injustice done to Dr. Johnson. The case may be briefly stated thus: Mrs. Vaughan's child had been ill some days, as she supposed from hooping-cough, when she took it on a Saturday afternoon to Dr. Johnson, who prescribed anodyne and antispasmodic medicine for it, after the administration of which, at intervals, during Saturday night, the child continued drowsy until ten o'clock, p.m., on Sunday, when it awoke, having had as good a night as could have been expected. It continued in a satisfactory state to the parents (under the circumstances) during the remainder of the day, and until a quarter before two o'clock, a.m., on Monday, when they again thought it necessary to seek medical advice. At this time it was observed to be evidently much weaker, and altogether worse. It died at a quarter before six, a.m.

According to Mr. Taylor's evidence, if the opium used in preparing Dr. Johnson's paregoric elixir was three times as dark-colored as that used for his own, Mr. Taylor would think Dr. Johnson's three times as strong; or, if Dr. Johnson's mixture contained an addition of sweet spirits of nitre, or any other spirit, that addition would make him consider it to be stronger of opium in proportion to the additional spirit. However, it appears that the child may or may not have swallowed eight drops of laudanum at four doses in the course of sixteen hours (the last dose at eight, a.m., of Sunday); that it was as well as it could be under its disease, from one, p.m., on Sunday to one, a.m., on Monday; but that it died the following day. So that the witnesses would have us believe that although these (two drop) doses of laudanum