

TUBERCULOUS PERICARDITIS, WITH EFFUSION; REPEATED TAPPINGS; BACILLI IN THE EXUDATE; RECOVERY.

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[From Professor Osler's Clinic.]

(Selected.)

The case was that of a colored boy, W. H., aged 20, who entered the Johns Hopkins Hospital under Dr. Osler, March 31, 1901, complaining of pain over the heart. He left the hospital six months later improved, and at the present date, January, 1902, is still improving.

His family and personal history were negative.

The present illness began two months before admission, with pain in the right chest, sharp and stabbing in character, worse on taking a deep breath. He had cough and shortness of breath; had never spat blood, but had had frequent night-sweats. Three weeks before admission he began to have pain over the heart, so severe that he gave up work.

On admission he appeared well nourished, and the mucous membranes were of good color. The signs in the lungs were practically normal, except over the lower right side, where the percussion note was impaired and the breath sounds enfeebled.

Over the heart was heard a loud to and fro pericardial rub. It was superficial, rough and altered by pressure. The heart sounds were heard with difficulty, but a point of maximum impulse was clearly seen. The cardiac dullness was normal in extent. The pulse was regular, of good volume; the arteries were somewhat sclerosed. The abdominal examination was negative. The blood showed hæmoglobin of 85 per cent., and red blood-corpuscles of 4,600,000 per cm. The sputum was scanty, muco-purulent, and not blood tinged. No tubercle bacilli were ever found in it, though they were repeatedly sought. The urine showed albumen and casts.

Gradually the signs of pericardial effusion developed. The first change to be noted was in the pulse. To April 8 the average rate was 114 beats per minute. Between April 8 and 25, it was 120. The temperature changed at the same time. Before April 8, it ranged between 100 and 102 degrees; after, it became irregular, occasionally intermittent, ranging between 97 degrees and 104.7 degrees. The area of cardiac dullness began to increase. By April 15, there was movable dullness in Rotch's space. On April 19, the pulse became paradoxical. On auscultation, both the friction rub and the heart sounds became more and more feeble, especially at

the apex. The most noticeable change in symptoms was in the cough, which came in severe paroxysms, ringing and high pitched in character. There was some increase in the shortness of breath. By April 24, the cardiac dullness extended 14 cm., instead of 7 cm., to the left of the middle line in the fourth interspace, and 3 cm., instead of 1.5 cm., to the right.

On April 25 Dr. Osler noted three signs indicating that the effusion was considerable in amount. First, the apex impulse was no longer visible; second, there was distinct bulging of the precordium; and third, there were signs of compression of the left lung, namely flat tympany in the left axilla though not at the back. A needle was introduced in the fifth interspace 1.5 cm. outside the mammillary line. About 10 cc., of slightly yellow fluid were removed. No organisms were found in it. On April 27 the pericardium was again aspirated and 25 cc. removed. The needle was inserted at nearly the same place. The fluid contained a few red and white blood-corpuscles, but no organisms were found. After the aspirating the patient was better. The cardiac dullness now extended 13.5 cm. to the left and 1.5 cm. to the right. There was no dullness in Rotch's space. By May 1 the apex beat was again visible, and by May 4 the heart sounds were heard, but there was embryocardia. The patient now began to complain of abdominal pain, referred to the epigastrium. The cough continued severe and the temperature was more elevated. On May 11 Dr. Osler ordered a third pericardial tapping. The needle was inserted twice, once in the fifth interspace and once in the sixth. Both times the heart was touched. Fifty cc. of fluid was removed. It was centrifugalized and in the pus a clump of eight or ten tubercle bacilli were found. For a few days the boy was more comfortable, but on May 14 he complained of pain in the right side, submammary region, where a loud pleural friction was to be heard. It is probable that the previous abdominal pain was due to diaphragmatic pleurisy. By June 7 the signs of pericardial effusion had considerably diminished.

The apex beat was well seen 10 cm. from the middle line, the heart sounds were loud, and there was gallop rhythm instead of the embryocardia. No pericardial friction rule was heard. However, signs of pleural effusion on the right side began to appear.

Increasing dullness, definitely movable, absent vocal fremitus and suppressed breath sounds. On June 8 the right pleural cavity was tapped, and more than a litre of fluid was removed. The chest filled up repeatedly, and was tapped in all 14 times. About 20 litres of fluid were removed. The fluid

was always blood-stained and sterile in cultures. No tubercle bacilli were ever found—this was probably due to the fact that centrifugalization caused the fluid to clot, thus making the difficulty of the search great. No inoculation experiments were made. At the fifth tapping a differential count of the leucocytes of the exudate was made. Of 1,000 counted, 98.5 per cent. were small and 1.3 per cent. large monoclear forms, while only 2 per cent. were polynuclear forms. This ratio was constant.

The intervals between the tappings became progressively longer and the patient had shortness of breath only when the fluid was high. He was tapped last on September 7, and the fluid did not collect again. On January 19, 1902, he was seen by Dr. C. H. Bunting at the Hospital, to whom I am indebted for the following examination: There were no signs of pleural nor pericardial effusion. Heart: the point of maximum impulse was within the nipple line, the sounds were well heard and clear and there was no friction rub. Lungs: the right shoulder droops; the left side of the chest is fuller and expands more. Over the right lung the note was resonant above, impaired below. The vocal fremitus was diminished and the breath sounds feeble over this impaired area. The general condition was good. There was still marked cough with scanty expectoration. Thus after extensive serous membrane tuberculosis, the patient is left with a quiescent process, the only physical signs being of a thickened pleura and a partially collapsed lung. The points of interest in the case are (1) the great value of repeated tappings in serous effusions; (2) the finding of tubercle bacilli in the pericardial exudate; and (3) the high percent of mononuclear forms in a tuberculous exudate. I wish to thank Dr. Osler for the privilege of reporting the case. —American Medicine, March 8, 1902.