

sounds were feeble and distant, though apparently without valvular murmur. The area of cardiac dulness was increased. The tongue was moist and somewhat furred. The stomach was retentive, though there was no appetite. The urine was rather scanty. From time to time there were paroxysms of terrible dyspnoea and cardiac distress, in some of which she seemed almost asphyxiated. Her condition became, in all respects, somewhat worse during Saturday and Sunday, and, in addition, there were on the latter day two convulsive attacks, with loss of consciousness for a few minutes, and slight muscular spasms of the face, arms, and legs.

I saw her in consultation with Dr. Rex, first on Sunday night, September 9. The patient was lying in bed, with but a single pillow under the head. The face was very pale, and the lips livid; the extremities tended to be cold. There was extreme restlessness and jactitation, with a sense of suffocation if any one even approaches her. It was necessary to fan her constantly. The respirations were over 60; the pulse at least 145; very small, feeble and intermittent. The pupils were dilated; the expression very anxious; the intelligence clear. There were constant complaints of severe præcordial pain. The paroxysms of alarming dyspnoea were now very frequent. On physical examination no lesion of the lung was found. The præcordia was somewhat prominent. The impulse of the heart could neither be seen nor felt, and its sounds were hardly audible, being distant and feeble, and apparently without murmur. The point of their greatest intensity was at mid-sternum, opposite the third interspace. At the normal position of the apex-beat no sounds were audible. No friction sounds were heard. The area of cardiac dulness was much enlarged, and of rudely triangular shape. Its base was on the level of the seventh rib, and extended from one inch to the right of the sternum to two inches to the left of the line of the left nipple; the upper limit of the dulness was the second interspace. Its greatest transverse diameter corresponded to the level of the fifth interspace. Changes in the position of the patient's body produced no effect on the horizontal lines of dulness.

The urine contained a slight trace of albumen, and microscopic examination showed a few fragmentary hyaline or granulo-hyaline tube-casts, and a few cells of renal epithelium. There was no oedema of any part, save a slight puffiness about the ankles. The question of tapping the pericardium was discussed, but the parents would not consent. She had been using digitalis and a diuretic mixture. These were continued, ten drops of digitalis being given every three hours. A blister four inches square was applied over the præcordia. She objected violently to stimulants, even in very small doses, asserting that they immediately caused agitation of the heart, with great distress in the head.

On the other hand, Hoffman's anodyne gave some relief to the paroxysms. During Monday and Tuesday (September 10 and 11) she grew worse, if possible, and had several slight convulsive attacks. I saw her again with Dr. Rex, late on Tuesday night. She was then dull and listless, with livid lips and cold extremities. The respirations were mere shallow gasps 75 to 80 in the minute. The pulse was over 100, extremely thready and intermittent. At times, also the respirations were distinctly of tidal character, ascending and descending with marked intermissions. Each paroxysm of dyspnoea seemed as if it would prove fatal, and it seemed clear that death would occur before morning. The consent of the parents being obtained, I immediately performed paracentesis of the pericardium with the assistance of Dr. Rex and of C. B. Nancrede. The smallest needle-pointed canula of Dieulafoy's aspirator was employed, with a vacuum jar. The puncture was made in the fifth intercostal space, about one inch inside of the line of the left nipple, *i. e.*, nearly in the normal position of the apex-beat. The needle was introduced in a direction upwards and inwards. As soon as its extremities were fully covered by the soft tissues, the communication with the vacuum jar was opened, and the needle was cautiously pushed onwards. When the liquid began to flow into the jar, and the point of the needle was felt to be free in the pericardial sac, the needle was directed somewhat downwards and outwards. Rather more than eight fluid ounces of reddish serum were removed, after which the flow ceased. The serum contained a large proportion of albumen, many red blood globules, and a large proportion of pseudo-fibrin. No difficulty whatever was encountered in the operation. Once or twice the point came in contact with a firm and apparently roughened surface, which was probably the apex of the heart, coated with lymph. The effect of the operation was magical. The pulse fell to 114, became regular, and much more full. The respirations soon fell to 40, and became much more deep and regular. The apex-beat of the heart could be felt, though still feeble and too high up. The cardiac sounds became immediately much more distinct. The lips grew more red, and the expression improved vastly. She expressed herself as feeling much better, and able to lie quietly. She was ordered iodide of potassium gr. v. and tincture of digitalis gr. x, each every four hours. The diet of skimmed milk was continued. There was no evidence of any return of pericardial effusion, and for two days she continued very comfortable, although the urine was still faintly albuminous. On Friday, September 15, two severe convulsions occurred; the mind grew dull; the respiration again became rapid, and tidal in character; and the pulse intermittent. On September 16 she continued in a partially uræmic state, with several convulsions.