

a patient past middle life who is the subject of gout, alcoholism or a wasting disease, if in addition to the above we find atheromatous changes in the blood vessels, or degeneration elsewhere, such as arcus senilis, together with weak, irregular and at times intermittent permanently slow or fast pulse. Presence of angina pectoris, edema of the feet, Cheyne-Stokes respiration, with pseudo-apoplectic attack, all tend to confirm a suspicion of fatty heart.

*Prognosis* is always unfavorable, but by regulated habits and medical treatment life may be greatly prolonged. Between 80 and 90 per cent. of cases of fatty heart die suddenly.

*Treatment.*—In fatty infiltration the treatment is practically the same as for obesity. The most satisfactory method is by reducing the quantity of food taken in twenty-four hours, together with plenty of exercise. The patient should be allowed to partake moderately of a mixed diet. The foods rich in albuminoids should be diminished least of any, because it would be sure to work injury to the system if it were supplied in too small an amount. The fats and starches are more potent in increasing adipose tissue and in shielding from oxidation the fat already stored up in the body. A varied diet is extremely desirable for one who is corpulent, and we should exclude neither fat nor starch fully from the dietary, but merely limit the amounts to be taken. Every case must be treated as an individual one and receive careful consideration. I know of no remedy taken internally that has the power of reducing fat, unless it is phytolacca, which has been so highly recommended by numerous members of the profession. My experience has taught me not to look upon it with much favor.

In fatty degeneration a number of remedies have been recommended; some are very useful, such as arsenic or iron. Whatever treatment is adopted must be continued for some time. There is no plan of treatment that can restore the degenerated muscular fibers. The principal thing is to improve the tissue making power of the blood; this is best accomplished by iron, cod liver oil, strychnia, nutritious diet, fresh air and out-door exercise; violent exercise or mental excitement are to be avoided. In cases where there is no atheromatous degeneration, the heart muscle can be greatly strengthened by having the patient take moderate exercise, but never to the extent of causing dyspnea. In this way the myocardium is strengthened and its functions are increased. Blisters applied over the precordium have been known to give relief when cardiac stimulants have failed. Dr. B. Robinson, in a case where other remedies had failed, was able to obtain marked temporary relief from dyspnea by the Paquelin cautery applied over the precordium at sixty or seventy points.

In conclusion, I give briefly a history of a case of fatty heart with bradycardia followed by death five weeks after beginning treatment.

Jas. R., American, 54 years of age, of medium height, rather spare build, weighing 140 pounds, fairly well nourished, came to me August 23, 1895, and gave the following history: Had been a free drinker of malt liquor and spirits; never had rheumatism or venereal disease; for two weeks he had been having dyspnea on exertion, especially when going up stairs, some cardiac palpitation and considerable edema of the feet and legs. Examination of the chest revealed the signs of a dilated heart; apex beat was one-half inch outside the nipple line and in the sixth interspace. Heart sounds were not as intense as normal and were heard loudest four inches below the nipple, and were audible at the outer border of the mammary region and heard almost as distinctly at the sternum. In other words, the sounds

at the apex could be heard over an area of nine inches, from the sternum to the axilla, and from the nipple to the eighth interspace, a distance of four inches, showing we had considerable hypertrophy of both the right and left ventricles.

His circulation was poor, as evidenced by the blue color of the hands and feet; pulse was slow, regular and very soft, and beating thirty-two to the minute; no atheromatous changes could be detected in the arteries.

I made a diagnosis of fatty heart and forbade him leaving the house, placing him upon the usual heart tonics, nitroglycerin gram 0.0006, t. i. d., nux vomica, with small doses of digitalis every four hours, together with iodid of potash in 0.32 to 0.65 gram doses. There were signs of improvement for a few weeks, his pulse rate having increased at one time to forty-eight beats per minute, but very little increase in strength was perceptible. By September 25, one month from the beginning of treatment, his limbs had become so edematous that I was obliged to make several scarifications, which afforded him marked temporary relief.

He disregarded my instructions and had continued his occupation up to the day before his death, which occurred without any premonition October 1, just five weeks from his first visit to me. He probably would have died at his post except for the extreme methods to which I resorted to prevent his leaving the house on the day before his death. I afterward learned that he was at his work every day except that on which the scarification was made and the one just preceding his death.

Postmortem was made three hours after death; rigor mortis present; internal organs were found normal, excepting the heart, which was extremely large, weighing twenty-two ounces; from the upper portion of the auricle to the apex it measured seventeen and one-half centimeters; lateral measurement fifteen centimeters, and six centimeters in thickness. All the valves were found competent and thickened in substance. The cavities were all dilated, a blood clot being found in the right ventricle. No atheroma of the coronary artery were found. Ventricular walls were slightly hypertrophied. The heart had a mottled appearance due to an excess of fat in spots. The muscular fibers were found diminished and much degenerated.

## REPORT OF TWO CASES OF HEART DISEASE.

Read before the Mississippi Valley Medical Association, Oct. 7, 1897.

BY JOHN M. BATTEN, M.D.

PITTSBURG, PA.

W. H. M., age 68 years, married and the father of two children; was always temperate and correct in his habits. He was without any hereditary taint and belonged to a long-lived healthy family. He had never been sick but once, about fifteen years ago, when he had a severe attack of acute pneumonia. Since then he has been affected with a cough which annoyed him but little till a year ago, when it became more noticeable. I prescribed for it two or three times during the last year but the cough did not improve.

May 28, 1895, at 11 p.m., I saw him professionally. There was extreme dyspnea; clothes about him in bed were wet with perspiration. His pulse was very weak and rapid, extremities cold, countenance anxious and heart feeble. He had been at a lodge meeting that evening and felt the attack coming on while there. It was with great difficulty, with the aid of a friend, he was enabled to reach his home three squares away. I prescribed for him digitalis and whisky and applied heat to his extremities. With this treatment he was relieved in a few hours, and in a few days went to his business, which was that of a lumber merchant. My diagnosis was insufficiency of the mitral valve with irritability of the heart.

July 15, 1895, he had a second attack very similar to the first, which was treated in the same way. It occurred about the same time of day. On the evening of July 18, patient had a third attack, similar but more alarming than either of the other two. In this attack circumscribed congestion and pneumonia developed in the region of the heart, due probably to

insufficiency of the mitral valve, which caused regurgitation of the blood, driving it back into the pulmonary veins, thereby causing acute circumscribed pneumonia. From this attack patient remained in bed and at his home till Aug. 29, 1895, when he went to his business.

Sept. 4, 1895, at 11 p.m., he had a fourth attack, in which the symptoms were more alarming than those of the previous three. This attack was also followed by acute circumscribed pneumonia. He remained in bed three weeks and did not leave his home till Dec. 4, 1895. He then went to his business. These last two attacks I treated as the first. During the intermissions I put him on iodid of potash 0.65 gram, bichlorid of mercury 0.0016 gram, tincture of digitalis 0.62 c.c. and nitrate of strychnia 0.0016 gram three times a day. He remained at his business till January, 1896. Afterward he was sent to a sanitarium at Cambridgeborough, Pa., where he died May 25, 1896, with what was claimed to be acute Bright's disease. Frequent examinations of the urine, during my attendance, showed that his kidneys were perfectly healthy.

Mrs. T. M., aged 53 years, died March 16, 1897. She was the mother of three children, all living, and was of a scrofulous diathesis. She had had an intermittent pulse thirty years and was short of breath on ascending stairs. For the last year her heart had a strong beat in systole becoming weaker in diastole, still weaker in the next systole and weaker still in diastole, then an intermission. The heart would then repeat as before. The beats were quicker than normal. This condition I attributed to valvular disease accompanied by hypertrophy and irritability of the heart. In December, 1895, she had edema of the legs, but this subsided under treatment in about two weeks and she was reasonably comfortable till Oct. 10, 1896, when I examined her urine and found albumin, specific gravity 1040; there was edema of the legs. October 21, her urine showed only a trace of albumin; legs still edematous. November 8, edema extended to the thighs and body, right arm and right breast, together with ascites. About this time pneumonia developed. November 12, there was 8 per cent. of albumin in the urine. The rusty coated sputa subsided and cough diminished. November 16 she was still expectorating a muco-purulent matter, breathing quick and labored. December 13, I punctured the abdomen with a trocar. Very little fluid ran through the canula. On removing the canula, the abdominal fluid dribbled for about three weeks through the opening made by the trocar. For three weeks previous to tapping the patient was unable to lie down. Afterward for a time she was able to take the recumbent position; the albumin disappeared, the cough ceased and the urine cleared and was normal in quantity. This condition continued till the puncture healed. Then the ascites increased so that the patient was unable to lie down after Christmas, 1896. Jan. 18, 1897, I again performed abdominal paracentesis to relieve dyspnea but, as before, the fluid only dribbled for a time through the puncture. During this time the ascites and edema diminished considerably. Since October, 1896, fluid oozed through the skin of her legs in abundance and caused gangrenous ulcers. She died of uremic poisoning and was affected with this a week before her death. The treatment consisted of tonics, diuretics and cathartics. After the first tapping there was no albumin found in the urine.

The general symptoms of these two cases ran in about the same line, ending in death in about the

same way, pressure from ascites interfering with the function of some organ. It also serves to develop what is too often true, that the physician called late in the course of the disease, is apt to overlook the primary disease and make his diagnosis according to the most prominent secondary condition that exists at the time.

The history of the first case would exclude Bright's disease as the primary disease and cause of death. A patient with such a history could have had Bright's disease of the kidneys only as a secondary condition. The second case could have been with much assumption of truth diagnosed either albuminuria or acute pneumonia, at the time either of them was most prominent.

## THE NEW ELECTRO-MERCURIC TREATMENT OF CANCER.

Read before the American Electro-Therapeutic Association, at Harrisburg, Pa., Sept. 22, 1897.

BY G. BETTON MASSEY, M.D.

PHILADELPHIA, PA.

In a limited series of cases in which accessible and supposedly still local carcinomas and sarcomas have been more or less perfectly subjected to this method I have had two well-proven cures and four or five cases now progressing toward the same happy result. Some of these cases date back to 1893, when I accidentally noticed the good effect of a mercurial coating on a zinc anode in contact with a cancerous ulceration, and began the treatment with dosages of 100 and 150 milliamperes with combined mercury and cocain cathaphoresis, but my own estimate of the value of the method received an immense impetus during the past spring on the occasion of the first employment under general anesthesia of 500 and 1,000 milliamperes to a carcinoma of the breast. The usual effect of a local necrosis about the zinc-mercury electrodes occurred and the tumor shrank perceptibly at once from a cataphoric dispersion of its liquid contents; but a most important fact was noticed the following day when the dry dressing was removed; it was then seen that the puffed, purplish, malignant, appearances had disappeared beyond the area of necrosis, the skin and subcutaneous tissue now lying flat and pink to a considerable distance from the electrode. This proved that a substance, or influence, had passed from this amalgamated electrode through the malignant tissue, that had a lethal effect on the cancer cells while failing to hurt the normal tissues containing them.

The key to the results in all the cases was contained in this single observation, and I predict that few, if any, discoveries in medicine have surpassed this in practical importance, for it not only gives conclusive proof of the correctness of present pathologic views, which regard cancer cells as primarily local and possessed of a low organization and vitality, whatever their true nature may be, but, more important still, indicates a remedy for accessible cases of this increasing scourge of mankind.

The special value of a method that enables us to project a nascent oxychlorid of the most powerful antiseptic into the tissues at will, probably into the interior of the very cells themselves, is theoretically evident. It also appears that a greater portion of the mercury-laden current will traverse the cancer prolongations than the surrounding tissues on account of the lessened resistance due to increased vascularity of the morbid tissue. Theoretic considerations