

had been one of the best known local athletes in his youth, his greatest forte being snowshoe racing. His pulse was fluttering, irregular and uncountable. The heart beat could be distinctly seen through the night shirt; apex beat visible and palpable over a large area. Heart estimated to be beating considerably over 180 per minute, but the beat was too frequent to count. Slight edema of the lower extremities. The more alarming symptoms passed off with a night's rest and the hypodermic injection of 1-50th gr. of atropine.

The next day the following notes were taken: "Feels fairly easy. Arteries sclerosed. Pulse 108, very irregular. Heart dulness vertical from the middle of the 4th rib, transverse six inches from $\frac{1}{2}$ inch outside right sternal border to 1 inch beyond nipple line. Heart sounds sharp in quality; an occasional rough murmur heard."

In a few days he improved sufficiently to get about. Seven months later the transverse dulness was $5\frac{1}{2}$ inches; heart rhythm irregular, rate 108 per minute. Only 65 or 70 beats could be felt at the wrist, the others being too weak to be felt. A year later his heart dulness was sometimes about normal but varied in a very remarkable way from $2\frac{1}{2}$ to $4\frac{1}{2}$ inches, according to the state of fatigue. Heart beat forcible and extensive; no murmurs. Pulse when quiet 75, irregular. He was kept on moderate doses of digitalis, about half an ounce of the infusion a day, for a long time, and required medical attention less and less. His urine was examined at various times and found normal. One note of his urine read: "Clear, acid, 1016, no albumin, no sugar." I have not seen him lately, but hear that he is getting along very well and attending to business. If his heart gets troublesome he takes digitalis or suprarenal extract. It is now about seven years since I first saw him.

I fancy we have here to do with a heart injured by athletic and, perhaps, other excesses. One of his sisters has sclerosed arteries and a moderate degree of cardiac hypertrophy. He probably had similar tendencies which made his heart unable to stand the strain put upon it by his numerous hardly contested races.

Among the most interesting examples of irritable heart are those that declare themselves under the influence of abnormalities of nervous control. The case which made the most lasting impression on my mind as an example of the emotional heart, and which first directed my thoughts to the questions discussed in this paper, is unfortunately one of which I have only a page or two of imperfect notes, although I had her under observation for some years.

Case VI.—Unmarried woman, about 33 years of age, first seen in October, 1905. Complained of swelling of feet and palpitation of heart. Heart first became troublesome after death of mother a couple of years