Why an anæmic state of the blood, superadded to the changes which take place in the blood in all fevers, would not especially predispose to the development of cardiac murmurs, without any actual cardiac disease, may well be asked.

According to Bristowe, in his article on Anæmia, "the development of abnormal sounds in the heart and blood vessels, independent of organic lesions, is of common occurrence and highly characteristic, a soft systolic murmur is to be heard freqently over the situation of the aortic and pulmonary valve, and along the course of the ascending arch and innominate artery, occasionally at the apex;" while Fagge, in describing different forms of anæmic murmurs, says: "An anæmic murmur of another kind is systolic in rhythm, and is heard over the heart and main arteries. It is usually loudest at the base, and it often seems to be traceable along the pulmonary artery, rather than along the aorta. . . . . Whether an anæmic murmur is ever localized at the apex, I am not sure. . . . . The basic systolic murmur often has a rough, harsh quality, suggestive of anything rather than a functional origin."

Fagge, therefore, doubts an anæmic murmur ever being localized at the apex. But in both our cases this occurred. In this 2nd case which we have been discussing, the murmur was developed under observation, and the characters of it suggested regurgitation, rather than that it had a hæmic origin. In the 1st case, the onset of the cardiac manifestations was too sudden to be from a hæmic cause. In both cases, the distribution of the murmurs, together with their intensity of sound, pointed to an incompetency of the valves from some cause. "For an anæmic murmur is usually loudest at the base, and it often seems to be traceable along the pulmonary artery rather than along the aorta." So, while anæmia itself cannot be excluded from the cases, it of itself is not sufficient to account for the collapse in the one case, or the physical signs in either.

That an endocarditis may have been the cause also needs investigation. It is a complication which may be looked for in any of the specific fevers, and slight degrees of it are found in typhoid oftener than commonly supposed. Jenner noted it in three cases out of sixteen, while, according to Hoffman, the endocardium is often opaque and thickened, owing to a fatty degeneration of its lining epithelium; and in several instances