chaska[4] has observed in mixed infections that ordinary pyogenic germs acquire an increased virulence under the influence of typhoid infection, but might not this be due simply to the asthenic condition of the patient and consequent low power of resistance ?

Isolated instances of endocarditis as a complication of typhoid fever are to be found in the literature, as the one to which we will again refer from the *Lyon Médicale*, March 18, 1905; but unfortunately the bacteriology was not worked out in this case. It was one in which vegetative endocarditis was found on the margin of the mitral valve, so they were unable to state either the presence or absence of Eberth's bacillus.

Pericarditis was present in three of the Johns Hopkins series, of which death followed in one, and in this case typhoid bacilli were found in pure culture. Of the 717 cases[5] admitted to the Montreal General Hospital from January 1st, 1897 to December 3rd, 1902, there was but once case of pericarditis.

The onset of endocarditis is usually seen during the 3rd week accompanied by pain, fever and leucocytosis,[6] the fever and leucocytosis often preceding the localising symptoms. The complication is usually ushered by chills, in more than one-quarter of the cases.

Frank Hinchley,[7] St. Louis, relates a case of typhoid with relapse on the 24th day. On the 24th day of the relapse a synovitis of the knee was noticed. On the 29th day she complained of sharp pain in the cardiac region associated with restlessness and anxiety. The pulse rose from 92 to 108, to 130-150. The acute symptoms subsided in ten days, but the rapid heart's action persisted for five weeks. No blood examination was made.

In this connection Hewlett[8] states that typhoid bacilli are not to be found in later weeks of typhoid fever, but reappear after the relapse.

Cole[9] finds that 75 per cent. of the cases showed typhoid bacilli in the second week. The case before referred to from the *Lyon Médicale* was that of a patient 26 years of age, in the third week of the disease when she entered the Hospital; pulse 150, arrhythmia and tachycardia present. The patient came in on Nov. 10th, and died on Dec. 21st. During the course of the illness variable systolic murmurs were heard, but the heart was not enlarged.

The pulse of patients admitted to the Toronto General Hospital in my service with typhoid fever early in the attack usually showed dicrotism, and the more severe the symptoms in the early stage of the disease the more marked was the dicrotism. This