

In some cases it is impossible to distinguish between typhoid and gastro-enteritis. Vaughan refers to cases where typhoid symptoms, even to perforation of the intestines, have been produced by ptomaines, in the formation of which Eberth's bacillus played no part. It is as much a mistake to call every mild continued fever gastric as to call every severe one typhoid. Rodet and Roux conclude that Eberth's bacillus is only a degenerate form of bacterium coli commune, brought about by altered environment. If this be true, then there is some excuse for the too frequent remark that "it has turned into typhoid." Yet the post-mortem appearances of this disease are so distinct and characteristic that we conclude it has a specific cause; that typhoid is always typhoid from the start, and never a development of any other disease; nor can we believe that the always present and innocent bacterium coli commune can cause it under any circumstances. It is now usually agreed that a group of pathogenic germs not yet diagnosed may give rise to typhoid fever with the typical intestinal lesions. The typhoid germ and its product is allied with a great variety of germs, and their toxins give rise to an endless variety of symptoms.

No one symptom, nor, indeed, can any two, or even three, be mentioned which may not be irregular or absent in undoubted cases of typhoid, and, on the other hand, there is not one of the usual symptoms which may not be present in other diseases.

Dr. Bonning, of Detroit, performed an autopsy to find the cause of sudden death, and learned that it was caused by perforation of typhoid ulcers, although the man had presented no symptoms of that disease. More reliance must be placed upon the occurrence of rose spots than upon any other one symptom, yet this rash often occurs in other diseases, such as miliary tuberculosis; and, on the other hand, such a careful observer as Fagge says he has failed to find them in many cases in which careful search was made every day. There are few physicians who, misled by the temperature, have not regarded other ailments as typhoid, while, on the other hand, cases of typhoid where the fever is absent or irregular are not uncommon.

Leibermeister describes cases without any fever, and Dr. Strube, a surgeon in the German army at the siege of Paris, describes an outbreak among the troops in which twenty-three cases were fatal. In many of these the temperature was subnormal throughout, and in others it never went above normal, yet characteristic lesions were found on post-mortem.

Much was expected from the examination of the excreta. It has long been advised to strain the fæces for shreds of typhoid ulcers. Of course, their presence would be more conclusive than their absence. The bacteriological examination is not satisfactory, because Eberth's bacillus in