

discovering on suitable media of growth colonies, or growths, which closely correspond to typhoid bacilli ; or, again, if we examine the stools of the patient supposed to be affected by the disease, there again we may, among crowds of colonies presenting but a slight divergence from the characters usually regarded as typical of the bacillus of enteric fever, find some few colonies only distinguishable by the most delicate tests, but still not quite conforming to the type, and the question is, are those colonies truly those of the typhoid bacillus, or do they represent some closely allied species ? For myself I scarcely see how it is possible to give a positive answer in either of these cases. It is true that in other diseases the point can be settled by experimental inoculation into animals ; in enteric fever, however, unless one is successful in gaining cultures of the microbe direct from the human organism from a typical case of the disease and employing them while they are still young, inoculation into animals is of no effect. Then there is another side to the question. Suppose that one repeats the series of experiments made by Babes, and carefully examines the peculiarities of the growths obtained from different cases of undoubted typhoid at different periods of the disease, then it is possible by these means to separate out quite a large number of cultures, whose general properties, it is true, correspond with those of the typical *Bacillus Typhi* of the text-books, but which at the same time in minuter characters differ from the type and from each other to quite the same extent as do the cultures of doubtful import found in supposed contaminated water and in the fæces of suspected cases. I do not mean to say here that in the majority of cases of typhoid one comes across any marked divergences from the type, but in a large number of doubtful cases it is that one is most likely to have, and that one most frequently does have these slight cultural divergences, and the question is what is the conclusion at which we are to arrive. Are we dealing with varieties of the bacillus of typhoid, or are these wholly different and non-pathogenic species ? What is to be our diagnosis ?