

The question as to the length of time which the agglutinins remain in the blood after typhoid is one of considerable interest and importance. There can be no doubt that in the majority of cases these bodies disappear fairly early. Widal says that in most cases good reactions cease to be obtained after 1st month of convalescence. Stewart, however, says that a reaction more or less complete can be obtained during first year in 50 per cent of all cases while in a few cases a reaction is found as late as 10 years. Most other authorities while agreeing with Stewart as to possibility of late reactions, find that good reactions are seldom found later than 6 months after the fever. In several cases which I have examined the reaction has been very feeble or entirely absent in from three to eight weeks. In my own case a good reaction is still found twenty weeks after febrile period, in dilutions of one in thirty insidesixty minutes. The reaction earlier in convalescence was present in lower dilutions (1-50) and appeared much sooner (five minutes). I have one case in my note books where a reaction was present eight years after the fever, The probabilities are in such a case that the typhoid bacillus has retained a lodgment in the body (gall bladder or urinary passages) and hence kept stimulating the formation of agglutinins. One can readily see that a persistent reaction might lead to an erroneous diagnosis if one depended mainly on the test.

Regarding the technique of the reaction, a short discussion of some of its points may be of some interest. I will consider 1st the method of securing the serum. In ordinary diagnosis one works almost entirely with the dried blood drop. This method is open to the objection that one cannot accurately estimate the necessary dilution requisite in carrying out the test, for in making the test properly the serum should be so diluted as to make the drop contain not more than one part in 20, some say 1 in 30 or 50. This dilution is necessary because most normal sera will when not diluted, or even with slight dilutions cause loss of motility in typhoid cultures and perhaps partial clumping. While strict accuracy cannot be obtained by the dried blood method, yet experience soon teaches the proper amount of diluting fluid to add to the dried blood drop, this being generally gauged by the color of drop which should be a