

NOTES OF THREE HUNDRED AGGLUTINATION TESTS TRIED WITH B. COLI COMMUNIS.

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In the absence of sufficient data upon the agglutinative action of blood serum upon *B. coli*, it was thought well to try this action in a routine of cases taken at random in the various wards of the hospitals; and, in addition, some healthy cases were observed. Many of the cases noted, were examined with a view to their Widal reaction, and those which gave the reaction are referred to as typhoid.

Technical Method.

Three forms of *B. coli* were isolated, selected from a number, and named I., II. and III.

I. Showed slight motility, slight fermentation and very slow formation of acid. It was isolated from the healthy bowel.

II., from the stomach of a case of pernicious anæmia (and proved to be *B. coli*), was of very slight motility, moderate acid-forming and slight coagulating ability, and of moderate gas-producing power.

III., was isolated from the bowel of a case of chronic diarrhoea, was of slight motility, strong acid-forming and coagulating power, and strong gas-producing power.

The limit of reaction fixed at one hour; and the dilution was in case of fresh serum, 1 in 10. Where the specimen was dried blood, a dilution was made as near as possible to 1 in 10, though of necessity this could be only estimated. Whenever a specimen was positive at 1 to 10, it was tried at 1-20, 1-30, etc., until reaction failed.

A complete reaction was decided to be present in those cases in which cessation of motion occurred, together with clumping and decided clearance or tendency to clearance of the field between the clumps. Where there was a distinct clumping without the field being cleared of free bacilli, the reaction was called "suggestive." These semi-reactions were fairly frequent, and no doubt indicate the cases in which a true reaction would occur if the dilution were 1-2, 1-3, etc., instead of 1-10.

Every hanging-drop was examined as a control previous to the serum being added to the culture, to prevent pseudo-reactions. This was especially necessary in the case of Colon iii, which at times would show a pseudo-reaction 2 to 3 hours after the bouillon had been inoculated.