

In a few cases we have met with a partial typhoid reaction only, in mild cases clinically fibrillar, where the fever subsided by lysis in within two weeks of the onset. Here, the possible presence of typhoid appeared to indicate the prudence of keeping the patients in bed and avoiding articles of diet which are contra-indicated in typhoid. Our experience has been that fibrillæ, with completely negative blood reaction, get suddenly well after a few days of fever. Here, also, spleen puncture, as in Dr. W. H. Park's case, might enable a decided diagnosis to be made earlier than by the blood test alone. Westbrook recommends spleen puncture under the circumstances. The possibility of infection by organisms resembling the typhoid bacilli must naturally be borne in mind.

Diabetic blood has been found by Block and by W. H. Park, to give a decided agglutination. We have examined two cases of diabetes which both gave perfectly negative results.

#### CONCLUSIONS.

The difference in reaction observed between typhoid blood solution and blood serum is not simply due to varying intensity, but to an alteration in the relative prominence of the agglutinative, paralytic and disintegrative phenomena which constitute the reaction. The extent of this difference also varies with the virulence of the culture, but the difference probably depends also on the presence of part of the specific substances elsewhere than in the blood serum.

Blood solution has a greater capacity than blood serum for producing the disintegrative (bacteriolytic) changes described by Pfeiffer. Descriptions of this phenomena are conspicuously absent from the many recent accounts of the reactions with typhoid serum as observed in hanging drops.

The paralytic effect is relatively more marked with serum than with blood solutions.

Agglutination without stoppage of motion is more readily occasioned in virulent cultures by blood solution than by serum, and does not indicate existing typhoid.

It appears preferable that for the dry blood method only attenuated cultures should be used. These have the advantage of being more easily kept in readiness than virulent cultures, and are less sensitive to changes of temperature. With the serum method virulent cultures give prompt results. Dried blood serum can be readily obtained and transmitted to the laboratory by pushing aside the edge of a blood drop which has clotted for a few minutes but has not dried