

minute diplococcus forms. No bacilli were seen. (Vide Fig. II., Plate II.) This was transferred to a Bouillon made from kidney reacting, 1.5 per cent acid to phenolphthalein; this showed minute diplococci with halos, diplobacilli, a slender bacillus with polar staining and besides these, the ordinary typical colon. (Fig. I., Plate III.)

Cultures from the coccus and diplococcus forms were made on broth, milk, potato, glucose, agar and litmus agar. They showed that in all respects the organism reacted like the *B. Coli*, with the exception that indol was not produced. Unlike Dr. Adami's diplococcus, this one produced a very heavy growth on agar.

When grown with sterilised bile on agar, the cocci and diplococci seen, were even smaller than those produced on plain agar.

With regard to the presence of *B. Coli* or other germs in the urine of chronic nephritis, information is lacking, and my investigations on this point are still going on, being hampered at present for want of enough clinical material. Still, in the cases I have examined I have found the colon bacillus, although as is well known, it is also present in other conditions, notably cystitis, nephrolithiasis and pyelonephritis suppurative. *Fernet* (Bull. et Mém. de la Soc. des Hôp. Paris, Dec. '92), in a case of acute interstitial nephritis occurring two months after an abortion, found the *B. Coli* in great numbers in the urine.

Several observations have been made on normal urine to discover if it usually contains germs. The best studies are those of *Enriquez*, (*Recherches bact. sur l'urine normale*, Sémin. Méd., No. 57, 1891, p. 468,) This author collected the urine in the way which I have employed, and concluded that normal urine was aseptic.

In the urine of 11 healthy people, and five cadavers, the cultures in 10 were sterile, in five staphylococci, and in one, non-pathogenic bacilli were found. These last cases, however, were taken from tuberculous wards, and in two there was a history of previous infection. The urine of seven healthy rabbits was sterile. In the post mortem records I have studied, as a rule, there is no note of cultures taken from the kidneys or urine.

In three cases of tuberculosis of the intestine, the *B. Coli* was found in the kidney once and in the urine once; one case sterile. In two cases of typhoid fever, *B. Coli* in one; one sterile.

One case of tubercular pyelonephritis gave *B. Coli*.

One case of nephrolithiasis gave *B. Coli*.

One case of chronic mixed nephritis with amyloid disease gave the colon bacillus.

The presence of the colon bacillus so generally in the kidneys, which I have studied, receives additional importance from the fact that in this study I have been careful to exclude all cases in which there were cystitis, suppurative pyelonephritis, and tubercular abscesses—conditions