

I will not here pretend to lay down what is the nature of these bodies; to call them nuclei or pronuclei would, in the present state of our knowledge, be if not absurd at least indefensible. Their arrangement is, however, very remarkable, and appears to be ultimately related to the vital functions of the bacillus. Here, again, abundant work is necessary before their full meaning is elicited.

Another series of observations begun by me is an examination of sections from some 200 portions of liver preserved from the necropsies at the Royal Victoria Hospital during the last three years. These I have selected from cases in which examination with ordinary stains has shown the absence of anything that could be spoken of as cirrhosis. So far I have already examined only 40 of these, but in this series of sections, to my surprise and, I must acknowledge, temporary confusion, I have found with scarce an exception indications of the presence of these shadows of the colon or allied bacilli. I stained these sections by carbolised fuchsin and bleached them in the sunlight and while I have found in them very rare deeply-staining diplococcus forms and still rarer typical colon-like bacilli, it is the minute brown shadows, namely, the unstaining diplococcus-like bodies tending to be surrounded by a halo that I have almost constantly come across. So common is the appearance, that in the three cases in which I have failed to recognise it I am inclined to ascribe my failure to insufficient study. In other words, not a little of the fine brown pigmentation recognisable in the liver cells apparently healthy (but not all) is an indication that colon—and presumably other—bacilli have been taken up by the liver cells and have there been destroyed. This statement I know will be doubted, but I make it with a full sense of responsibility. I have experimentally, and in the organs, more especially in cases of cirrhosis, observed the successive stages, and I have no longer any doubt about the absolute correctness of the statement.

From this it follows, we must assume (1) that the colon bacilli in small numbers, are, in the healthy individual, constantly finding their way into the finer branches of the portal circulation; and (2) that one of the functions of the liver is to arrest the further passage of these bacilli into the general circulation, and to destroy them through the agency of the specific cell of the organ.

I have not as yet been able to make a parallel series of examinations of the mesenteric glands; I can only point out that in cases of hobnailed liver the appearance of sections of these glands when properly stained by carbol-fuchsin or carbol-thionin is remarkable. (*Vide* Figs. VI. and VII.)

It is scarcely necessary for me to point out the steps by which the