

the clinical history of cirrhosis in man. If some depression of the functions of the hepatic cells be requisite, then we know that alcohol, the main predisposing cause of ordinary cirrhosis, has a direct action upon the hepatic parenchyma. Indeed Ramond² would seem already to have had a slight measure of success in the experimental production of hepatic cirrhosis, by giving to animals by the mouth alternating doses of alcohol and bacterial toxins over long periods. It is along somewhat similar lines that I am at present working, employing not toxins but cultures of the colon bacillus alternated with alcohol. The result will show whether this will give to us the solution of the cirrhosis problem.

I am the more inclined to be cautious, in that the conclusions reached in the appendix to my Edinburgh paper, although stated to be provisional, may naturally have raised expectations as to the specific nature of ordinary cirrhosis which this further contribution to the study must overthrow. It is so novel and unexpected a discovery that in the tissues the colon bacillus may be represented by a minute diplococcus-like body that I cannot but feel that for the statements contained in my Edinburgh paper no apology is needed.³ The recognition of this diplococcus-like modification in itself modifies and expands the subject to such an extent as to open up a very wide field. For the present I shall be amply satisfied if I have adduced evidence favouring the view that after all what—in the absence of adequate classification—I prefer to call “progressive hepatic cirrhosis,” is but one of the results of the entry of the colon bacillus and its products into the system.

In conclusion, let me state again that I do not for a moment assume that all extensive fibrosis or cirrhosis of the liver belongs to the same category. I fully admit that syphilis, tuberculosis, typhoid, and perchance some of the exanthemata, may be followed by extensive laying down of new connective tissue in the liver. But in none of these conditions, with the possible exception of syphilis, does the cirrhotic change assume the peculiarly progressive and extensive type seen in the hobnailed liver and the varieties of the same. And, as to Hanot's cirrhosis, never having studied a case possessing the classical symptomatology of this disease I cannot make any statement.

REFERENCES AND NOTE.

¹ Procedures recommended for the Study of Bacteria, *Journal of Amer. Public Health Association*, 1898, p. 75; reprint, p. 38.

² *La Presse Médicale*, April, 21st, 1897.

³ Of my previous observations, but one, I believe, has not been confirmed in my further studies. I refer to the observation that in the microbes isolated from a case of cirrhosis the flagella were terminal. In the earlier specimens, made by the Nicolle-Morax modification of Loeffler's method, I looked most carefully for lateral flagella and found none.