

a surrounding chronic phlebitis with or without direct action upon the liver cells.

During the last four years I have carefully studied all cases of hepatic cirrhosis which have come to the post-mortem room at the Royal Victoria Hospital to observe whether I could make out the existence in them of micro-organisms to such an amount and so constantly that we may safely conclude that the disease is associated with the presence of these micro-organisms. Here again the same difficulty pursued me as was present in the earlier stage of my studies upon the Pictou Cattle Disease; at times I could distinguish in sections the presence of numbers of minute diplococcus-like bodies, but further sections from the same case did not stain well, and there has been the added difficulty that the liver contains so many fine granules that in the unstained condition it is extremely difficult to make oneself positive that what one sees is not of the nature of some cellular precipitate or fine deposit. In two cases in 1895 and 1896, I thought that I had gained cultures from the liver, but upon growing these they were overrun with the colon bacillus and I lost them. In a more recent case, during last month, I was able to gain from an agar tube of the liver juice an extremely minute diplococcus staining with great difficulty, and scarcely visible. The tube was reported to me as being sterile and only upon the 4th or 5th day of the growth did I examine it myself, and found there this presence of small micro-organisms in small numbers, but when I tried to make further growths the microbe had already died out, if indeed, what I saw was anything beyond the microbes already present in the juice, upon inoculation of the tube, which had not proliferated.

In connection with this case, which was one of atrophic portal cirrhosis with pigmentation, I have been able to find micro-organisms in considerable quantities in the tissues. Dr. Abbott, who has been working on this case more especially in connection with the pigmentation of the organs, showed me some sections of the abdominal lymph glands which she had stained by Weigert's fibrin stain, and which under the high power had a peculiarly granular appearance. Upon examining with the 18th inch immersion, I found that the fine granules resolved themselves into great numbers of minute microbes of the character which I had learnt to recognise in connection with the Pictou Cattle Disease; namely, the micro-organisms present were extremely minute, even smaller than those seen in the Pictou Cattle Disease; in the main they were present as diplococci with a slight halo round them, very much smaller than the diplococcus of pneumonia, but like that organism certain of those present were longer and more distinctly in the form of diplo-bacilli.