

What is the meaning of this general interstitial fibrosis, or more correctly, what is the series of changes which leads to its formation? It is difficult to state with precision. At times it appears to be wholly in excess of any development of the above mentioned miliary gummata. Indeed, it looks as though it had not been preceded by any characteristic syphilomatous lesion, and the peculiar manner in which the connective tissue development extends between the rows of the liver cells, and becomes pericellular, and *parsi passu* the liver cells show evidences of atrophy, would seem to indicate that here we are dealing with, not so much the results of the productive granulomatous inflammation, as with a process of tissue disturbance set about by the diffusion throughout the system of the toxic substance generated by the virus. These toxins lead to the atrophy of the liver cells with synchronous development of connective tissue; in short, the appearances are largely, but by no means entirely, those of a replacement fibrosis.

A somewhat similar condition is occasionally to be met with in the kidney and that in the earlier stages of the disease. The only further point I need impress upon you here is that this generalised fibroid change may be developed in the earliest stage of the generalised disease, and by no means necessarily indicates a tertiary condition.

In some rare cases this extensive fibroid condition appears to be present with very little evidence of syphilomatous or granulomatous change in the organ. Marchand¹ has recently described and collected together about half a dozen examples of this condition. Curiously enough, this form of cirrhotic liver with atrophy in most of the cases has occurred in one of a pair of twins and that one still-born. It is also associated with evidences of profound hepatic disturbance in the shape of icterus. Marchand's cases are not wholly satisfactory so far as regards the history of syphilis in the parents, but, as he states, it is difficult to explain this remarkable condition of atrophy of the organ with extreme fibrosis, save on the supposition that the cases were syphilitic.

Coming now to the presence of gummata, Gubler noted in his earliest communications that scattered through the cirrhotic areas in the infantile liver were numerous fine paler flecks, which he likened to grains of semolina, and Virchow, studying these, spoke of them as miliary gummata. More and more evidence has accumulated as to the relationship between these minute, ill-defined tubercles or collections of small round cells, and the caseous gummata seen in the acquired disease. The relationship is identical with that between

¹ Ctbl. f. Allgem. Path., Vol. VII., 1896, p. 273.