

of new nerve fibres. But as the nerves have never been removed during life from cases recovering, but only after death from fatal cases, in which there was presumably no repair, the nerve fibres show pure degeneration or necrosis.

It is also to be remembered that the change found in certain parts of the nerves may be a secondary degeneration, caused by interruption of the nervous currents by lesion of the nerve at another point. But when interstitial change and nerve degeneration are present, it is not necessary to suppose that the nerve fibres suffer secondarily, being compressed by the hyperplastic connective tissue. On the contrary, there are instances in which the nerve degeneration must be the primary change, and the connective tissue change a consequence of it. For instance, this must be the case in the so-called secondary degeneration of conducting tracts in the spinal cord or nerves, in consequence of injury to the ganglionic tissue with which they are connected. It is clear that the break of communication will at first affect only the nerve fibres, and not the connective tissue surrounding them. Changes in this tissue, that is to say, sclerosis, perineuritis, or interstitial neuritis, must therefore be a consequence of the nerve atrophy. How this leads to connective tissue proliferation is a difficult question. But I have elsewhere attempted to show that it may be partly a consequence of the diminished resistance which favors overgrowth of the tissue which remains; and secondly, that when the nerve fibres are dead, the connective tissue deals with them as with a foreign body. It tends to form a barrier of fibrous tissue around them as if to encapsulate them.

In ordinary neuritis we could only prove which was the initial stage of the disease by examining specimens at different stages, which has not been done, so far as I know. Hence, since we do not know the necessary order of the changes, it is more reasonable, on the whole, to regard them as simultaneous results of the action of alcohol, and to speak of the whole process as alcoholic neuritis.

I can only just allude to the remarkable fact that similar nerve changes have been demonstrated in chronic arsenic-poisoning,

in lead-poisoning, in paralysis from bisulphide of carbon, and in the disease called kakke, while there is great reason to think that the nerve changes of diphtheria and other specific diseases are due to the same morbid process. All these will be forms of multiple peripheral neuritis.

*Changes in Other Organs.*—I have chosen the liver and the nervous system as typical instances of the injurious effects of alcohol on tissues; and there would be no time to speak of other organs in the same way. I can only, therefore, briefly mention what appear to be the most important points.

With regard to diseases of the kidney, one cannot but feel that the connection of different forms of Bright's disease with drinking requires further elucidation. The general belief in the profession certainly is, or was, that drinking to excess is a rather frequent cause of this disease. But Dr. Dickinson's observations and statistics tell so strongly against this view that further observations are needed if it is to be maintained.

The relations of alcoholism to disease of the generative organs is a very interesting though little studied subject. One of the oldest beliefs respecting the effects of excessive drinking is that such habits diminish fertility in both sexes, but especially in the male. The Rev. Stephen Hales, in the eighteenth century, even sought to show that the natural increase of the population of London was seriously lessened by the use of distilled spirits. The number of christenings (taken as corresponding to births) in London fell off from 19,370 in 1724 to an average of 14,320 in the three years preceding 1750. Whether these statistics rest on a sound basis I cannot say, but statements to the same effect have often been made. It is also stated that procreation, when one or both parents are inebriated, results in the birth of idiotic or deformed children, and Dr. Langdon Down has brought some such cases before the Society. It has never been shown whether this depends on any organic change in the testicles or the semen, or on the temporary inebriation. A few observations have been made on the condition of the male generative organs by Lancereaux and others. Corre-