

These are constantly at work, probably almost as much in our sleeping as in our waking moments, although the stimuli do not necessarily reach consciousness. Those neurones of the lower extremities, conveying constantly sensations for the maintenance of our equilibrium, naturally in the majority of people work more strenuously than those from the upper limbs, and usually are first affected. Their degeneration is clinically expressed in the loss of the muscular tone, the sense of position of the limbs and the consequent ataxia.

Although numerous cases might be cited where the incidence of the disease has been in the arms or elsewhere owing to relative over functioning, — for instance Mott reported a case occurring in a mounted policeman in whom the symptoms started in the arm with which he held his reins. Edinger reports two box-makers, one carpet layer and a letter sorter in the post office, all affected in the upper extremities. Also a naval officer with a history of primary infection who remained healthy until after a whole day in the blazing sun straining his eyes superintending target practice, developed an ocular palsy; this disappeared with rest but reappeared again later, and the man eventually developed true tabes.

Secondly, the purely sensory nerves which are constantly submitting sensations from the skin and mucous membranes would be liable to suffer and give rise to sensory disturbances. Thirdly, the eyes would suffer, and above all the constrictor iris which is constantly active in the reflex contraction of the iris to light, which must be almost constantly at work in contrast to the reflex arc for accommodation which is relatively seldom working. Thus is produced the Argyll-Robertson pupil.

In the same way the paralysis of the external ocular muscles, the bladder disturbances, the occasional atrophic muscular palsies can all be explained. One might ask why the peripheral motor neurone does not suffer equally with the sensory. To this Holmes has suggested the reply that the peripheral motor neurone is normally capable of responding to two sets of stimuli. First, those from the upper motor neurone, which are relatively seldom at work, and secondly, those from the peripheral sensory neurone, keeping up the tone of the muscles; it has the opportunity to repair when it is not at the service of voluntary impulses, it therefore would not be expected to become exhausted so readily as the sensory neurone, and when, the sensory neurones having degenerated, it does not get stimuli from them, it has still more time to repair.

If we accept this theory it is no longer necessary to look upon every tabetic as a syphilitic. We can understand also how trauma, exposure to cold and wet, excesses of any kind, can each be recognized as a pre-