

equilibrium, the one with the other, so that if a cell becomes weakened by disease, or from any cause, others which lie near it must grow, eventually crushing it out and taking its place. Let us apply this to the nervous system,—we may get such a weakened condition in congenital states. These have been described by Gowers under the term “Abiotrophy,” where simply from an inherent lack of vitality certain cells cannot last out the normal span of life,—they gradually die and their place is taken by the surrounding tissue. Again, where the amount of work required of a group of cells is abnormally great, even if their inherent vitality be perfectly normal, those cells may succumb simply from their inability to recuperate the loss of tissue due to the abnormal functioning. Such conditions one sees in occupation palsies, of smiths, etc., which, it is true, usually occur in under nourished individuals.

Thirdly, if the nutrition of the cells be impaired through a toxine circulating in the blood then the normal amount of work required of a cell may be *relatively* too much and its recuperative power being impaired it gradually dies. At the same time everyone recognises the fact that certain toxins have an elective action on certain parts of the nervous system. As an illustration of this, those interesting cases of Lillienstein may be cited, showing the incidence of disease falling on the part or parts of the body that had been in a state of functional over-activity.

A. A girl employed in a type foundry suffered from plumbism and the condition affected, not so much the extensors of the wrist and fingers, as the muscles supplied by the ulnar nerve. It was discovered that the girl's occupation entailed a constant quick deviation of the wrist to the ulnar side when she was filing type.

B. Another girl employed as a telephonist developed neuritis in the right arm, seemingly attributable solely to continually holding the heavy receiver in the right hand. The adoption of another apparatus which did not necessitate the employment of the right hand was followed by a disappearance of the symptoms.

Numerous other cases might be quoted. In tabes a similar condition is present. In this disease the reparative processes in the cells is impaired, due to the noxious action of a toxine on the general system, this toxine in most cases being syphilitic in origin, and those neurones which are normally most active, or most constantly at work, are those which suffer. These are, the sensory nerves from the muscles which take an important part in the regulation of muscular contraction and are constantly submitting those stimuli by which we can become aware of the condition of our muscular system and the position of our limbs.