

meninges, or of the spinal cord? The truth would seem to be that when a neuritis of this kind is mild in character and affects a few only of the fibres of any particular nerve, no appreciable symptoms are produced thereby, or, at any rate, such slight phenomena as it may induce are lost in the complex symptomatology of the pyrexia; and that, for some obscure reason, these nervous lesions sometimes become exaggerated, extend to still other bunches of fibres, and then give rise to the well-marked symptoms due to a diffuse or a localized neuritis: sensory, motor, and trophic disorders, confined to the region supplied by one or several nerves, according to the distribution of the determining lesions.

As regards the *etiology* of this affection, some authors have regarded it as due to the anemia which must necessarily result from a long febrile illness. That such is not the case is proved by the actual condition of many of the patients who have shown no such degree of blood-impoverty as would be at all sufficient to account for serious disorder of the nervous centres or their branches. The series of cases produced by Notknagel were selected from the barracks, and were all young, vigorous, and full-blooded men. The effects of any such anemia would surely be more general, involving loss of energy in movements, but not a true paralysis. It could not possibly produce the clearly defined paralysis affecting special nerves as we find after typhoid fever. The other hypothesis which has been suggested is that the disorder consists essentially in a degeneration of the affected muscles. That this cannot be, is sufficiently obvious from the extensive sections of the body which may be simultaneously involved as—*e.g.*, both lower extremities, or these together with an upper extremity; from the constant presence of pain at some period, and often severe; and from the existence of anæsthesia.

Post-typhoid paraplegia generally sets in gradually and disappears gradually, but, in rarer examples, it comes on suddenly and passes off either suddenly or, at any rate, very quickly. Such a case is that reported by Ollivier, which led him to infer the existence of a true, but temporary, congestion of the spinal cord. There is nothing impossible about the hypothesis, and it seems necessary in order to explain such a case, but certainly does not apply to the more common forms of gradual development. Notknagel suggests that actual spinal hemorrhage is more probably here present, and that meningeal hemorrhage has, in reality, been often found in fatal cases of typhoid fever.

The predilection for certain special groups of muscles observed in the paralyzes of plumbism and of diphtheria does not exist in the same degree after typhoid fever. In it there is no rule, and, to explain it, we must look for some cause capable of making its influence felt in an infinite variety of situations: the ulnar or the peroneal nerve, a plexus of nerves, both lower extremities, an upper, together with the opposite lower, extremity. At the same time, all degrees of intensity may be