DIPHtherie Toxin UND DER NERVEN-SYSTEM (Action of Diphtheria Toxin on the Nervous System). Billchousky and Nartouski. (Neurologisches Centralblatt, July 1, 1900).

The authors describe experiments which they have recently carried out in Mendel's laboratory. The pathological changes have been located in three situations—the peripheral nerves, the spinal cord (parenchymatous and interstitial myelitis, with secondary changes in the nerves and muscles), and the muscles. The authors injected sterile diphtheria toxin into white mice, rabbits, and guinea-pigs. Large doses produced rapid death, with anatomical evidence both of general intoxication and of a special action on the vascular system. The animals which survived this stage developed, eight or ten days after the injection, more or less typical post-diphtherial palsy. The vessels were found quite full and with pathological changes in their walls leading to scattered foci of hemorrhage. There was no sign of meningitis or encephalitis, nor were the nerve cells of the brain or cord with a few isolated exceptions affected. Preparations by Marchi's method showed nothing noteworthy in the brain or cord, but extensive degeneration of the myelin sheaths of the peripheral nerves; this was confirmed by Weigert's procedure. The muscle fibers were the seat of fatty change. The conclusion is drawn that the essential lesion is parenchymatous degeneration of the peripheral nerves; the slight changes in the anterior horn cells are held to be secondary or of cachetic origin; while the vascular alterations play but a subordinate rôle in the pathogeny of post-diphtherial palsy.

JELLIFFE.

SULLE MODIFICAZIONI CHE IL PROCESSO PUTREFATTIVO PUÒ IMPRIMERE ALLE CELLULE NERVOSE GIÀ PATHOLOGICAMENTE ALTERATE (Putrefaction in Pathological Changes in Nerve Cells). L. Bardzky. (Rivista di Patologia Nervosa e Mentale, vi., 1900, No. 2, p. 49).

This observer has attempted to decide the nature and extent of putrefactive *post-mortem* changes in the nerve cell as distinct from the pathological changes of disease during life, a point of special importance in all researches on the finer cortical pathology of the human brain. After referring to the work of Schultze, Hutchinson, Trezebinski, and others, he gives the following results obtained by himself: (1) The coloration (chromophilia) of the achromatic substance of the nerve cell and its rarefaction are changes which are so subtle and shifting as to be impossible to recognise with certainty as due to morbid agencies occurring during the evolution of the putrefactive process; (2) that vacuolation of the fundamental substance (protoplasm) of the cell is a change belonging to the same category; (3) that chromatolysis or destruction and disappearance of the substance of Nissl's bodies, partial or total, has its peculiar and specific aspects which it maintains very constantly, so that these different characteristics can be recognised even where putrefactive changes are somewhat advanced; (4) that the initial stage of chromatolysis preserves a very constant appearance, which is characterised by a swelling and breaking up of the chromatic bodies; (5) that the cribriform condition of the cell body is clearly recognisable only in the initial stages of putrefaction, and this condition readily undergoes change into pulverulent state (dusty disintegration and dispersion of the chromatic substance) of the protoplasm, which is identical with the condition due to simple cadaveric decomposition;