

toxines ascended to the medulla, chiefly through the posterior columns, and thus provoked an ascending myelitis.

7. The lesions produced upon the neuroglia by the direct application of the toxins are the same as described by Vassale, Donaggio and others in the various intoxications and infective processes. In the oblongata the prevalent alterations are found in the crossed pyramidal tracts and posterior columns.

8. The alterations produced by the toxins affect the nerve fibres more than any other part of the nervous tissue. These lesions affect principally the myelin, and consist in a physical modification of the same, whereby the connections between the various nerves are lost. There is partially a chemical modification of the myelin also present.

9. The local action of the toxins has much importance in the genesis of various paralyses as seen in the human family, attacking first the sheaths of the nerves, then the nerves, then later the nerve centres in the oblongata.

KRAUSS.

198. BEITRAG ZUR PATHOLOGIE DER GANGLIENZELLE (Contribution to the Pathology of the Ganglion Cell). O. Juliusburger and E. Meyer (*Monatsschrift für Psychiatrie und Neurologie*, 3, 1898, p. 316).

These writers conclude, from their examination of a number of cases, that the changes which occur in the chromophilic elements of the ganglion cells are quantitative, vary, therefore, only in intensity, and do not differ in character in the various diseases. They cannot distinguish between the "reaction at distance" and the primary lesions of the cells. The structural cellular changes are simply the manifestations of altered cell vitality. According to their views, the chromophilic elements are capable of regeneration.

SPILLER.

199. ZUR PATHOLOGIE DER HEMIPLEGIEN IM GEFOLGE DES KEUCHHUSTENS (Contribution to the Pathology of Hemiplegia Resulting from Pertussis). Hans Luce (*Deutsche Zeitschrift für Nervenheilkunde*, 12, 1898, p. 272).

A boy of five years became hemiplegic immediately following a convulsive attack in whooping cough. Death occurred after two days. A careful microscopical examination failed to reveal a sufficient cause for the hemiplegia. No hemorrhage within the nervous system was found. Clonic convulsions, especially marked on the paralyzed side, indicated that the paralysis must be of cortical origin, and similar to that occurring in Jacksonian epilepsy. Considerable importance is laid by the author on the accumulation of CO<sub>2</sub> in the repeated convulsive attacks. Luce believes that the hemiplegia occurring in pertussis is due to meningeal hemorrhage, or has no detectable anatomical lesions, and that hemorrhage within the inner capsule or elsewhere in the motor tracts has not been demonstrated as the cause of such hemiplegia.

SPILLER.

200. LESIONS HISTOLOGIQUES DE LA CELLULE NERVEUSE DANS LE TÉTANOS ET L'IMMUNITÉ ANTI-TÉTANIQUE (Fine Histological Lesions of the Nervous Cellule in Tetanus and Anti-Tetanic Immunity). MM. Chantemesse et Marinesco (*La. Med. Moderne*, 9, 1898, p. 79).

The idea that the development of tetanus is due to a combination of the tetanic poison with the nervous cellule is not new. The authors have stated in a new fashion the confirmation of the theory

by stating the alterations produced by the toxin in the nerve cells. They examined the alterations in the large cells of the anterior horn of the cord in guinea pigs after a fatal dose of tetanus toxin was given in such proportion as to make it act slowly. Some of the animals received only the toxin, others a mixture of toxin and anti-toxin, others anti-toxin, twenty-four hours after the administration of toxin.

Their final conclusions are that the toxin produced decided lesions in the spinal cells, which might disappear if the animal lived long enough. The mixture of toxin and anti-toxin produced no appreciable symptoms, and the autopsy showed very slight changes in the nucleus and the nucleolus.

The nerve cell has an affinity for the tetanic toxin and the latter for anti-toxin. The precise nature of the cellular reaction cannot be decided. It may, however, be concluded from these observations that immunity to the tetanic poison shows itself in the form of appreciable anatomical changes in the nerve cells. If immunity against infection is due to the action of phagocytes, immunity to soluble poisons is a function of the resistance of the nerve cells, a phenomenon, that is to say, essentially histogenic in character. MITCHELL.

#### CLINICAL NEUROLOGY.

201. PARALYSIE DOULOUREUSE DU FACIAL NERVE, AVEC HERPÈS ZOSTER DE L'OREILLE (Painful Paralysis of the Facial Nerve with Herpes Zoster of the Ear). M. L. Jacquet (Bulletins et Mémoires de la Soc. Méd. des Hôpitaux de Paris, 15, 1898, p. 405).

Jacquet reports a case of left facial paralysis, which had lasted five days. In addition to the well-known signs, he notes:

1. A swelling of the preauricular region.
2. A red and painful edema of the left ear, on the concha of which a group of herpetic vesicles was found.
3. A very painful point just below the auditory canal.
4. Pain on pressure over all the facial muscles of the left side.
5. Increase in temperature in the skin of the left side of the face.

All these signs developed in one night after the patient had been exposed to a draught. The writer speaks of this as a painful paralysis of the muscles supplied by the facial nerve, with vasomotor and trophic disturbances, probably resulting from exposure to cold. The points of emergence of the fifth nerve were not painful. Jacquet believes that neuralgia of the facial nerve is more common than is usually believed, and may exist with or without paralysis of this nerve. He reported a case of neuralgia of the seventh nerve without paralysis in the preceding number of this journal. He is inclined to believe that sensory fibres are contained in the seventh nerve.

SPILLER.

202. DIE RÖNTGEN-STRAHLEN IM DIENSTE DER HIRN-CHIRURGIE (The Röntgen Rays in the Surgery of the Brain). S. E. Henschen (Mitteilungen aus den Grenzgebieten der Medizin und Chirurgie, 3, 1898, p. 283).

A man was shot through the left eye, and was unconscious three weeks. When he regained consciousness he could neither speak nor understand what was said to him, and was hemiplegic on the left side. Memory and speech gradually returned. About a year after the injury he suffered from headache in the right occipital region. The position of the bullet was determined by the circumstances at-