

of the patient, the integrity of his circulatory organs, the absence of nephritis, and the rapidly favorable course of the disease. His decision in the case is: Asthenic bulbarparalysis, without organic lesion.

J. W. COURTNEY.

- 134 "ZUR CASUISTIK DER RÜCKENMARKSVERLETZUNG DURCH WIRBEL-FRACTUR NEBST BESCHREIBUNG EINES GEHVERBANDES FÜR PATIENTEN MIT LÄHMUNG BEIDER UNTERER EXTREMITÄTEN" (Spinal Cord Injuries from Fracture of the Vertebrae, with Description of an Apparatus for Paraplegic Patients). Lenznick. Münchener med. Woch., 1900, No. 12, S. 386).

A man of twenty-six years fell from a scaffolding 14 meters high, striking on his back on a beam 3 m. above the ground, and then coming down upon his knees. He did not lose consciousness, but became at once paraplegic, with loss of control of his bowels and bladder. When he came under the author's care, a month later, the paraplegia persisted, there was complete anesthesia of the lower extremities, and there were bed-sores over the sacrum, the left malleolus, left leg and right heel.

There was deformity in the lower dorsal and upper lumbar regions, the twelfth dorsal spine being very prominent. Laminectomy of the eleventh and twelfth arches was performed by Prof. v. Eiselberg, a fracture of the left lamina of the twelfth arch being found, the dura and cord being compressed at this point and adhesions having been set up. The body of the twelfth vertebra was found prominent, but could not be reached on account of thickening of the dura, severe hemorrhage following at attempt to separate it.

The dura, being split up for some distance, was found to be adherent to the arachnoid on both sides, most firmly on the left. The cord showed a transverse scar. The dura was stitched and the wound closed. Healing took place promptly. The patient recovered some control over the bladder and rectum, but the paraplegia remained the same. In order to enable him to get about the author devised an apparatus consisting of two flat iron bars, each about 5 cm. wide, and long enough to extend from the shoulder to the heel. These were bent to fit the patient's figure, diverging somewhat above and below, one passing down behind each leg and being fastened together by three cross pieces at the upper part. These cross pieces were bent so as to partially encircle the trunk, and the leg portions were provided with four similarly curved supports, passing half way around the leg. To the lower ends of the bars were attached foot-plates, and to the upper straps for fastening the apparatus over the shoulders. This apparatus, thoroughly padded, was applied to the patient's back while he lay stretched upon his belly, and bound on with flannel bandages. The patient was then raised to an upright position, and eventually learned, with the aid of a Volkmann's bench, to get about over the smooth floor with a fair degree of ease. A picture of the original apparatus is appended. The author has since improved it by making the leg portions and the cross pieces for the trunk extensible, by a telescoping arrangement, and also has provided for the application of a head swing at the upper end.

ALLEN.

PATHOLOGY.

- 135 ZUR FRAGE DER "RETROGRADEN DEGENERATION" (On the Question of Retrograde Degeneration). E. Raimann (Jahrbücher für Psychiatrie und Neurologie, Vol. XIX, No. 1, p. 36).

Retrograde degeneration is a term used to describe the degeneration which takes place in a divided nerve centrally as opposed to the

peripheral or Wallerian degeneration. Raimann attempts to study this question by an examination of the cranial nerves. For the purpose of studying the peripheral neurone the motor cranial nerves are very suitable, as these nerves consist physiologically of the same kind of fibers, and as it is possible to follow the nerve and its root to their cells of origin. In this paper retrograde degeneration is used in its narrower sense and does not include the ascending degeneration which is thought by some to extend beyond the nuclei of origin. Dogs were used for the experiment. The facial nerve was laid free, and the three branches dissected and followed to their common root. Around the root a ligature was tightly passed. The nerve was then divided centrally; peripherally the stump was resected in order to prevent the possibility of regeneration. The wound was then aseptically dressed and the animals killed and examined in fourteen to fifty-six days later. The following conclusions are noted as the result of these experiments: 1. The peripheral portion of a nerve separated from its trophic center presents a very different appearance from the portion still in connection with this center. While the former shows, without exception, in its entirety the picture of Wallerian degeneration, the latter, together with the cells of origin, show evidence of a gradual and very slowly advancing destructive process, which must be described as atrophy. 2. The central portion of the nerve, as well as the cells, can undergo a rapid degeneration. This happens when traumatic or infectious or toxic processes complicate the break in the paths of conduction, for the reason that an injured neurone is always in a condition of more unstable equilibrium. 3. The term retrograde degeneration as applied to this condition is not a good one, and should be avoided. The author suggests the term traumatic destruction or degenerative neuritis. 4. While we must distinguish, as far as the central portion of the nerve is concerned, either an atrophy or a traumatic destruction, or a degenerative neuritis; in the peripheral portion only one process is observed, namely, Wallerian degeneration. SCHWAB.

THERAPY.

- 136 GEHIRN-SUBSTANZ IN NERVENKRANKHEITEN (Use of Brain Substance in Nervous Disease). V. Babes (Klin. ther. Woch., June 17, 24, 1900).

Following lines adopted by Pasteur in the treatment of hydrophobia similar results are claimed by the author following the use of injections of brain substance obtained from normal animals; further than this, functional nervous disease, such as neurasthenia and epilepsy, have been frequently influenced. This in the author's mind tends to show that the various toxins to which the nervous system is especially susceptible, and to which the symptoms of epilepsy, etc., are in main due, in the presence of foreign brain matter in the blood will combine more readily with this than with other nerve cells of the affected animal and thus will forestall such chemical changes as probably lie at the bottom of most functional neuroses. The author is certain that suggestion may be ruled out as an active factor in his cures, since he has been equally successful with children; and adults, where the subconscious self is clouded, have yielded not less remarkable cures.

JELLIFFE.

- 137 LE TRAITEMENT DE L'ÉPILEPSIE AVEC LES BROMIDES (Treatment of Epilepsy with the Bromides and Withdrawal of Sodium Chloride). Toulouse (Revue de Psychiatrie, Jan., 1900).

The author refers to a paper read before the Academy of Sciences by himself and Richet late in 1889, in which the conclusion was reached