plausible explanation than a reflex epilepsy of traumatic peripheral origin, cases of which occur much less frequently the more carefully epilepsy is studied. CLARK.

PATHOLOGY.

PATHOLOGY OF HERPES ZOSTER. C. Head and P. Campbell (Brain, Autumn Number, 1900).

These authors have made an extensive series of observations on the pathology of herpes zoster, founded on cases where the patient died at various periods subsequently. The acute changes found in the posterior root ganglion of the nerve supplying the affected area of the skin, consist of (1) an extensive acute inflammation with the exudation of small round deeply-staining cells; (2) extravasation of blood; (3) destruction of ganglion cells and fibers; (4) inflammation of the sheath of the ganglion. If severe, such a condition leaves a scar in that part of the ganglion affected and leads to thickening of the sheath above the affected area. On the other hand if the eruption has not been severe, all traces of the inflammation present in the acute stage may pass away, leaving the ganglion apparently normal. The changes in the posterior nerve root corresponded to the results which might have been expected from the lesion of the ganglion; they consisted of an acute degeneration followed by a greater or less amount of secondary sclerosis according to the severity of the acute destruction. The anterior root was in all cases normal. In the mixed peripheral nerves degeneration likewise occurs and can be traced right up to the fine twigs which pass into the skin to supply the area over which the eruption is distributed. The time relations of the degeneration and subsequent sclerosis to the eruption was the same in the peripheral nerve and the posterior root. The degeneration in the posterior roots can be traced into the posterior columns of the spinal cord. Where the eruption extends on to the arm the degenerated fibers can be followed in the cord from the root zone to the postero-external column, and by this path up to the nucleus cuneatus. Where the eruption is on the leg the field of degeneration passes into the postero-median column. The posterior roots in the dorsal region, containing as they do afferent fibers from the trunk, consist mainly of short fibers which do not not form a part of either the postero-internal or the postero-external columns in the cervical region of the spinal cord, but run up in the root zone adjacent to the posterior horn, get less in number as they ascend and disappear in a variable (6 to 16) number of segments. Thus the long fibers which form the postero-internal and postero-external columns in the cervical region come almost exclusively from the leg and arm respectively. Zoster of the branches of the trigeminal is associated with a similar lesion in the Gasserian ganglion to that found in the posterior root ganglia in cases of zoster of the trunk and limbs. This lesion causes secondary degeneration in the sensory root of the Gasserian ganglion both in its extra- and intra-medullary course. Zoster in all respects resembling that arising spontaneously may be produced by implication of a posterior root ganglion in inflammatory processes secondary to malignant disease, tubercle, or injury.

Sections through an unbroken vesicle of herpes zoster show a cavity, the floor of which is formed of naked papillæ which are in a condition of profound inflammation and are infiltrated with small

round cells which stain deeply. The cavity of the vesicle is filled with fluid which contains broken-down epithelial cells of all sizes and shapes, and small round cells. No sign of micro-organisms either in the vesicle or its surroundings can be found. The lymphatic glands enlarge and frequently become tender, and are found on section to be in a condition of inflammation and are free from micro-organisms. Thus there is the curious fact that a collection of inflamed vesicles containing a sterile fluid gives rise to enlargement and inflammation of the lymphatic glands which also show no sign of bacterial invasion.

Herpes zoster must be considered an acute specific disease of the nervous system, in which the febrile period lasts from three to five days. The rash may appear a few hours after the onset of the disease, or may tarry till the fall of temperature. As in the case of other specific diseases second attacks are very uncommon. An exactly analogous disease is acute anterior poliomyelitis, which similarly begins with malaise and fever lasting from three days to a week, and at a variable time during this febrile period paralysis is noted. Again, the pathological anatomy of acute anterior poliomyelitis is exactly similar to that of the posterior root ganglion in herpes zoster. Herpes zoster might justly be spoken of as acute posterior poliomyelitis. The changes in the posterior root ganglion consist of an acute interstitial inflammation accompanied by necrosis of the ganglion cells. Of the nature of the agent which is responsible for this we are completely ignorant. This agent commonly attacks one ganglion only. The ganglion most commonly affected are those which receive afferent impulses from the viscera through the white ramus of the sympathetic, and which (anatomically) contain a preponderance of the smaller type of ganglion cells that give rise to the shorter fibers of the posterior columns. These smaller cells among other functions probably subserve those of pain, for the long tracts of the posterior columns do not conduct pain impressions. Hence the intense pain which accompanies an attack of zoster. The eruption is probably produced not by disturbance of special trophic nerves, but by irritation of cells in the ganglion which subserve the function of pain, and more particularly that form of pain produced by afferent visceral impulses. JELLIFFE.

PSYCHIATRY.

BEITRAG ZUR DEMENTIA PARALYTICA BEIM WEIBLICHEN GESCHLECHT (General Paresis in Women). Jahrmärker (Allg. Zeitschrift für Psychiatrie, 1901, lviii, 1, s. 1).

The author gives the results of his study of 54 cases of paralytic dementia in women, from the Marburg Psychiatric Clinic, and comes to the following conclusions. The proportion of female to male paretics in the district from which his material came was about 1 to 7, figures midway between the extremes given. The number of cases of paresis is increasing. in females slightly more rapidly than in males. Women of the working classes were chiefly affected. Privation and care played a great rôle and in about one-third of the cases syphilis was pretty certain, while in a considerable number of the remaining patients, there was reason to suspect it. Hereditary predisposition was frequent. The majority of the patients were on admission between 40 and 45, the average age being 43½ years. Alteration of the menses apart from that due to age, was present in nearly all cases, but the influence of the climacteric did not appear