Abstracts of British and Foreign Journals.

Oppenheim on Cerebro-Spinal Concussion (*Berlin. Klin. Woch.* No. 9, S. 166, 1888).—The author commences an interesting paper by indicating the change that has taken place in the nosological conception of the nervous diseases induced by concussion. In earlier times, it was assumed that the traumatic force of a concussion, such as may ensue from a railway accident, was chiefly directed to the spinal cord, and under the influence of that view those symptoms which could with some probability be referred to a disease of the cord were mainly considered. Since then certain brain symptoms, which though not entirely overlooked were regarded as casual or unessential, have received keener scrutiny and consideration. Railway-spine (the old term used for denoting these cases) has grown into Railway-brain, traumatic meningo-myelitis into traumatic hysteria.

As the basis for a more accurate classification and nomenclature, the author details the results of his extensive clinical experience of such cases.

The symptomatology of these morbid states is exceedingly manifold and diverse. In the greater number of cases the most essential alteration involves the mind, especially the affective sphere. Melancholy and excitability form the core of the psychosis. The patients are gloomy, immersed in painful ideas, reticent; they prefer solitude. This depression is accompanied by a feeling of fear, which at times rises to violent paroxysms of terror. Although there is no delusion in the strict sense of the word, the recollection of the accident is so vivid, so largely determines the thoughts and feelings of the patient, that it attains a pathological character by its constancy and dominance in the mind. It prevents sleep, or influences the tenor of the dreams, so that the patient whimpers, shrieks, starts up, or springs from the bed in a state of frenzy.

There are two features which, in the author's opinion, differentiate this mental alteration from pure melancholia, with which

it has at least a great affinity in most cases, viz. the abnormal irritability and the decidedly hypochondriacal character of the mental disturbance. These persons, though brooding over their condition and absorbed in themselves, still are morbidly sensitive to external irritants. They shrink at slight noises, are thrown into agitation by circumstances which formerly would have failed to move them, are suspicious and easily mortified, readily burst into tears, and suffer themselves to be carried away by their feelings. Moreover, being swayed by the idea that the accident has caused them to be profoundly ill, they watch for, and exaggerate, the slightest disagreeable sensation.

Severe disorder of the intellect is seldom present, yet considerable dementia with progressive enfeeblement of memory sometimes occurs. Mostly one obtains only the impression that the patients, influenced by depressing emotions and the consciousness of disease, have not free exercise of their mental powers. Many of the patients easily become perplexed and complain of great absence, so that they may even lose their way in the streets, or enter the wrong house, &c.

Hallucinatory delirium at times accompanies the paroxysms of fear before mentioned.

The psychical anomalies may assume the form of 'traumatic insanity, rendering asylum control necessary in a small proportion of cases. Agoraphobia and acrotophobia have been observed.

Vertigo and spasms—the latter always belonging to the category of hysteric convulsions—are frequent. The vertiginous attacks may be attended with loss of consciousness, or prolonged hystero-epileptic seizures may occur.

Sensory disorders are nearly always present, though in manifold variety and intensity. They mostly show the seeming anomaly that characterises the mental affection—hyperæsthesia and anæsthesia are found running side by side in the same receptive sphere. Scintillæ and great sensitiveness to light coexist with a diminution of visual acuity, mainly in the form of concentric contraction of the field of vision. Dysacusis and tinnitus are present with a demonstrable enfeeblement of condition. Frequently a great part of the cutaneous surface is insensitive, while in the anæsthetic region there are hyperæsthetic zones; or there exists a hyper-sensitiveness to slight pressure or contact, with analgesia to severe stimuli—*e.g.* transfixion of a fold of skin.

Of much import in connection with this anæsthesia are the facts, that it never coincides with any particular nerve territory, and it

most rarely has a distribution such as occurs in spinal cord disease. Often there is merely a tract along the outer aspect of the lower extremity.

There are cases in which only a single limb or portion of a limb was affected by the trauma, and subsequently a total hemianaesthesia of the same side has developed. Girdle pain is seldom complained of.

Sometimes the muscular sense is impaired to such a degree, that the patient requires to control all movements with the eyes.

Dull, compressive, non-lancinating, dorsal pains are common, and lead to arrest of voluntary movements. Headache is frequent.

Myotatic irritability usually is increased. The superficial reflexes may be exaggerated, more often they are lessened.

Disturbances of motility are almost always demonstrable. Movements are executed slowly and without energy. One may often ascertain that, if the patient exert stronger volition, there is a reserve of motor capacity.

Very diverse are the abnormalities of gait; they do not usually agree with those appearing in material diseases of the spinal cord, and doubtless in this matter a psychical element frequently plays a part. Sometimes the peculiarity is of such a nature as to suggest malingering. One patient could walk backwards with greater ease than forwards. In the rare forms of unilateral palsy the affected leg trails, but in a manner which deviates in certain particulars from the dragging observed in ordinary hemiplegia. Reeling, on closure of the eyes, is often to be noticed.

Tremor is very common: it is specially apparent in the extended hands and usually has the characters of that occurring in hysteria, neurasthenia and alcoholism. The tremor movements may be so violent that the whole body is agitated. It is notably increased by mental excitement: rarely is it limited to voluntary efforts.

Speech suffers in many cases; not in the form of a genuine aphasia, bulbar paralysis or scanning utterance: the anomalies are peculiar—the patient breaks off in the middle of a sentence as if he lost the thread; or single words are emitted tardily, others explosively; or the speech is interrupted by frequent inspirations and sobs. Some patients explained their peculiarity of speech by confessing, that they forgot in the middle of a sentence what they wished to say.

Attacks of palpitation, combined with fear, quickening of the pulse, and sometimes with flushing of the face, dilated or unequal pupils and tremor, are frequent symptoms. In other cases there may be constant acceleration of the pulse, or blushing of the face,

neck and breast, with axillary hyperidrosis, may occur. Dilatation and hypertrophy of both ventricles developed as a consequence of the cardiac disturbance in one patient.

In a large number of cases the general nutrition suffers: anorexia, constipation, impotence may be present. Vomiting, thirst, polyuria, and pyrexia appeared in two of the patients. Disorder of the bladder function is rare. Sluggishness and inequality of the pupils are frequent. Reflex iridoplegia existed in only a small fraction of cases, viz. five. Optic-nerve atrophy was found in only two patients.

Analysis of the above sketched clinical phenomena must lead to a conception of these morbid states which differs essentially from those formerly prevailing. The old theory, that a meningo-myelitis develops in consequence of the injury, received the assent of German authors, and the term *Railway-spine*—the product of that theory—was accepted by them. Later, the French school, perceiving the analogous nature of the sensory troubles in railway cases and hysteria, has proclaimed the diseases of the nervous system due to railway accidents to be nothing but hysteria. Charcot further showed that during hypnotism paralytic conditions of the same character as those observed after accidents, and accompanied by the same forms of sensory disorder, can be produced by suggestion or by a slight blow upon the extremity.

But it is seldom a pure psychosis, such as melancholia, hypochondriasis, simple dementia; or a pure neurosis, such as epilepsy, hysteria, neurasthenia, which results from the injury: usually the form of disease is mixed and anomalous. At any rate the essential symptoms point to a cerebral basis, and, though it is not denied that a local lesion of the spinal region may sometimes form the starting-point of the affection (reflex neurosis), the term *Railway-spine* is quite inappropriate for the majority of cases. Neither does it suffice to substitute the nomenclature, traumatic hysteria or traumatic neurasthenia: the true classification places the greater number of cases under traumatic neurosis, or traumatic neuro-psychosis.

Obviously the material changes giving rise to severe vesical troubles, reflex pupil rigidity, or optic-nerve atrophy, would exclude the few cases in which these signs occur from the above categories.

In general the life of the patients does not seem to be shortened, but the prognosis quoad recovery is altogether bad—the author has not been able to ascertain one case of restoration to health.

The worries associated with litigation notably increase all the troubles. After solution of the compensation question, amelioration often is observed. The diagnosis between disease and malingering may require prolonged observation, but usually is not difficult. Morbid states, exactly similar to those above described, originate from concussion due to other causes than railway accidents—*e.g.* machinery accidents in factories—where the question of indemnification is entirely absent.

Regarding the antecedents of the author's patients, hereditary predisposition to nervous disease could very seldom be made out. Alcoholism was more frequent.

Pomorski on Plexiform Neuroma of the Intercostal Nerves, with Fibroma Molluscum and Neurofibromata (*Virchow's Archiv*, January, 1888).—The subject of this rare combination of morbid developments was a strongly-built corpulent man, aged 28. Dyspnoea and severe pain in the right side of chest, which had existed a few weeks, occasioned his entrance into hospital.

The clinical diagnosis was:—Sarcoma in right side of thorax, Pleuritis hæmorrhagica, Ascites, Fibroma Molluscum, Hæmophilia. Death occurred in three weeks. On the skin of the trunk and extremities there were numerous warts, varying in diameter from $\frac{1}{4}$ to 5 cm., none exceeding $\frac{3}{4}$ cm. in height; most were sessile, few pedunculated. Nearly all presented a rough wrinkled surface composed of thickened dry epidermis. deep groovings and constrictions of the larger ones indicated their formation by the coalescence of many small nodes.

Right lung entirely collapsed. From the clavicle to the fourth rib the right pleural cavity was filled by two globular fibrous tumours, each as large as a child's head: their surface was smooth, light grey or yellowish, glistening and gelatinous in appearance; consistence, tense and elastic. Concealed by these tumours was a large mass of convoluted, ramose, tuberos varicose cords, spreading outwards from the vertebral column over the costal pleura, united to each other and to contiguous parts by a fine soft, loose, connective. Some coursed in serpentine form to the under surface of the fibromata. At the one end a cord was bulbous; at the other it was found to spring from an intercostal nerve by from one to three fine processes, which ran spirally through the connective tissue. The cords generally were firm, but here and there soft and gelatinous; where firm; the appearance was fibrous; in other parts, yellow and shining.

At the vertebral column the interstitial tissue was very thick, and formed pouches, with smooth walls, surrounding the cords, and the latter had grown through the intercostal space to the outer surface of the ribs, and lay enveloped in a layer of dense connective tissue, which adhered to the thickened periosteum.

Projecting from the surface of costal pleura were red, soft nodules, the size of a lentil or pea, scattered over both ribs and interspaces.

The intercostal nerves were thickened to about double their normal size, and showed numerous fusiform and nodular swellings, giving rise to a rosary-like appearance. The nodules in pleura were most closely set where this appearance was most pronounced.

The trunk and branches of the nerves of upper limbs, also the vagi, exhibited considerable general thickening with multiple fusiform nodes, and excentrically placed gelatinous spindles. The smaller branches of the brachial nerves, especially, had a varicose or rosary-like contour. Accurate dissection failed to show that the node formation in the nerves exactly corresponded to the multiple nodes in the skin, or that the terminal branches of the nerves entered the molluscal nodules; but a close relationship between the three forms of tumour was evident. The fibroma molluscum consisted of small growths of yellowish, soft, gelatinous connective tissue; similar tissue formed the enlargements of the nerves, and the substance uniting the cords of the plexiform neuroma, as well as the membrane investing the large fibromata.

Respecting the histological features:—In the fibroma molluscum, long cones of epithelium were seen growing into the tumour mass from the thickened Rete Malpighii. In the obliterated hair follicles, without evidence of a preformed canal, lay globules of concentrically disposed epithelium, having a dull silvery lustre. The tissue beneath the epidermis consisted of a delicate wide-meshed reticulum, formed solely by the processes of cells, with a soft homogeneous ground-substance in the meshes. Small round and fusiform cells existed on the reticulum. At the limit of the corium and subcutis were large and small soft fibrous nodes, formed by small round cells, with large nucleus, densely crowded together and surrounding sweat-coils and ducts, vessels and hairs. The cells in the larger nodules were mainly spindle-shaped. In almost every small nodule a sweat-coil or the duct of a sudiparous gland could be seen. The elongation of, and accumulation of glistening yellow hyaline contents in, the canals, as observed by Recklinghausen, were present in this case. The sweat-ducts were surrounded by a thick layer of round cells by which the connective tissue-sheath

was almost completely destroyed—the still visible epithelium forming an axial cord of an elongated body.

Next to the sheath of the sweat-glands the sheaths of the vessels partook in the formation of the fibrous nodules, by hyperplasia of their connective tissue: a thick fibrous adventitia was most perfectly seen. The part taken by the hair follicles was considerable; many of them showed cell proliferation in their connective tissue-sheath, and were encircled by fibrous tissue. Nerves were seldom seen in the nodules. In one section a primitive nerve fibre entered a small node laterally; in another, three medullated primitive fibres, lying parallel to each other, ran to the under edge of the tumour.

Sebaceous glands seemed to take no part in the new formations. Along the delicate fibres of the reticulum cells were accumulated in small heaps or longish strands.

Longitudinal section of a large node of the median nerve showed an excentric gelatinous nodule which was quasi-encapsuled, and could be easily shelled out. It was composed of a soft, juicy, connective tissue, provided with many round and spindle cells, with homogeneous intercellular substance and scanty short fibrillæ. The nerve fasciculi were pressed aside and flattened by the nodule, but exhibited normal amount of myeline substance. One bundle traversed the nodule—its primitive fibres being dissociated in a radiate manner by the proliferous endoneurium. At the point of entrance into the nodule, the nerve fibres were stained deep black by perosmic acid; but within the nodule they were the paler the more widely they were separated, evidently from atrophy of their medullary sheath. In one series of cross-sections made below the node, hyperplasia of the inter- and intrafascicular connective tissue, with corresponding wasting of the medullary sheath, was seen. Wherever the endoneurium was normal, the nerve fibres were sharply and clearly stained. By the use of carmine after treatment with osmic acid, one saw, on cross section, in many places where normal medullated nerve tubes were to be expected, small roundish bodies composed of a limiting membrane, three to five deeply stained nuclei, and clear glistening non-colourable substance. These were not regarded as being due to a division of the axis-cylinder, but to a nuclear proliferation in the nerve sheath, since longitudinal section disclosed no axis cylinder, only groups of small oval nuclei.

In the slender processes connecting the varicose cords of the plexiform neuroma with the intercostal nerves, nodulated nerve

fibres, medullated and grey, were present ensheathed by a soft cellular and vascular connective tissue. In the cords themselves were closely interlaced twisted fibres, having a vitreous homogeneous appearance, which stained light yellow with picro-lithiocarmine. On longitudinal section the centre stained rather more deeply with carmine than the periphery. In a transverse section one saw a sharply stained circular centre surrounded by glistening unstained material and a single contoured sheath.

ERNEST BIRT.

Martius on Tabes Dorsalis, with Presence of Knee-jerk and Absence of other Symptoms (*Deutsch. Med. Woch.*, March 1st, 1888).—The author describes a case interesting on account of the absence of the usual diagnostic symptoms, and the degeneration subsequently found in the spinal cord.

The patient was a man, aged 53, who was affected with spinal symptoms after an attack of typhoid fever. He first suffered with paræsthesia, limited exclusively to the upper extremities; the hands and tips of the fingers being numb and stiff. The same condition appeared later in the lower extremities, followed by weakness of the lower limbs. When he came to the hospital, five months after the first symptoms showed themselves, he complained of numbness in the hands and feet, and weakness in the knees. Knee-jerk present both sides, no Argyll-Robertson pupils, and he could stand with his eyes shut, thus the principal symptoms of ataxy were absent. The single sensory symptom was, patient could not bring his fingers together with the eyes closed, and felt as if there were thick gloves on his hands. About three months later, patient was seized with pneumonia, and died. Up to his death the knee-jerks were present on both sides. Examination of sections of the cord, after hardening in bichromate of ammonia, exhibited degenerations which quite agreed with the clinical symptoms presented during life. Dr. Martius compares the degenerations found with those artificially produced in animals by division of the posterior roots in various regions of the cord (Kahler and Singer). In the sections of the cord examined by him, he found absence of degeneration in the lumbar region, in the dorsal region slight degeneration of Goll's column, marked degeneration of the postero-external column surrounding it, but not of root zone. In the cervical region, Goll's column was only partially degenerated, but there was a very marked degeneration of the postero-external column, between the root zone and Goll's column.