as 35 were directly recommended by medical practitioners residing in the West Riding.

We shall be interested in knowing, when more statistics are forthcoming, the number of cases which recover as out-patients. We shall not be surprised if it is found that but few are cured at home, generally the worst locality for them, and that the chief advantage of this movement is *to provide a stepping stone to the asylum, where their chances of recovery will be greater.* It is a striking fact that 19 out of the 49 cases were presumably incurable. If the malady of the three incipient G.P.'s was arrested in its course, the advantage of the out-patients' scheme would be supported by precisely the kind of evidence we require, but which has yet to be brought forward.

The duties of the assistant medical officers have been rearranged. The pathologist no longer devotes the whole of his time to laboratory work, but has charge of 350 patients. With the remarks of Dr. Lewis we cordially agree, for we are convinced that under the name of pathological research much time is wasted by men who have nothing to show as the evidence of real work. We may at the same time remark that now scientific work is the "cry" of the day, there is some risk that other work may be neglected. It is highly important that the junior medical staff should not neglect to devote a fair share of its leisure to the immediate interests of the patients.

Perth District.—It is reported that besides the ordinary work of the farm and garden, occupation for the male patients, of a useful and remunerative kind, has been obtained in road-making on a neighbouring estate. The Visiting Commissioner commends work of this kind, if judiciously managed, as tending to break down to some extent the separation of the patients from the life of the outer world.

---

2. *German Retrospect.*

By W. W. Ireland, M.D.

Histology of the Brain in the Lower Mammalia.

Dr. S. Ramon Y. Cajal ("Neurologisches Centralblatt," Nr. 22, 1891) has examined the cortex of the brain of new-born animals, rabbits, cats, and mice, after Golgi's method. He has found that the superficial nerve fibres (Krause's layer) seldom arise from the processes of ascending axis cylinders coming from the deeply situated pyramidal cells, but are connected with the ganglion cells of the higher layers of the cortex. These cells are difficult to recognize in grown animals. They are polygonal or spindle-shaped. Ramon never saw the axis cylinder processes of the small pyramidal cells reach the white substance—they branched off till they disappeared—but he succeeded in tracing the fibres of

https://doi.org/10.1192/bjp.38.161.295 Published online by Cambridge University Press

the corpus callosum into the axis cylinder processes of the larger and middle sized pyramidal cells, or into their branches.

A Dog without a Brain.

At the meeting of the South-West German Neurologists in Baden Baden on the 26th May, 1889 ("Archiv für Psychiatrie," xxi. Band, 2 Heft), Dr. Goltz gave a report of his observations on a dog from whom he had removed both hemispheres with the scissors. The animal survived the last operation fifty-one days, and died of pneumonia. From the preparation which was shown it appeared that the whole of the cerebrum had been removed, with the exception of two symmetrical small pieces of grey matter at the base belonging to the middle of the gyri hippocampi, and some brain substance between the optic tracts and the crura cerebri. The corpora striata were also gone. The optic thalami were much injured and softened on their lateral surfaces. The rest of the thalami was covered by what seemed to be the remains of the corpus callosum and fornix. The cornua ammonis were wanting on both sides. The corpora quadrigemina were found to be uninjured, but spread out and softened. The pons Varolii and medulla had not the same firmness as in a normal brain. The left pyramidal tract was much smaller than the right. The left brain had been removed 263 days before the animal died. The cerebellum was uninjured. It is questionable whether the remains of the gyri hippocampi had any physiological connection with the stump of the crura cerebri. On the whole one can fairly say that this dog for the last 51 days of its life possessed no brain at all. Nevertheless after this deprivation the animal did a number of things, for whose performance, according to the opinion of most physiologists, the cerebrum is absolutely indispensable. A few hours after the last operation the dog was not only able to stand and walk, but he raised himself upon his hind legs, and put his fore paws upon the edge of the chest in which he found himself. Though he was unable to eat or drink, he chewed the food which was put deep into his mouth. The alternations of sleep and waking succeeded one another as in a normal animal. Before the time of feeding he was always restless; when satiated with food he became quiet and fell asleep. He could be waked out of sleep through touching any part of his skin. He then opened his eyes and stretched himself like an animal awaking from sleep. If one put his legs in an inconvenient position, he immediately redressed it by a counter movement. He could whine, growl, bark and howl. He did not appear to be affected by sounds, and could not have any sense of smell, as the paths of conduction from the olfactory nerves had been cut.

Changes in the Retina through the Action of Light.

Dr. Noiszewski ("Centralblatt für Nervenheilkunde," Juni, 1891) examines the question of the nature of visual impressions.

https://doi.org/10.1192/bjp.38.161.295 Published online by Cambridge University Press

The most notable portions of his paper are those in which he shows that certain chemical and physical changes have been observed in the retina to follow the action of light. Some hold that the decomposition of the purple matter in the retina is a process important to vision; others that this matter is only useful for the absorption of the long waves of the heat rays. He, Noiszewski, observes that the quantity of the purple in the retina stands in an inverse ratio to the quantity of light. For the perception of a visual image a smaller quantity of the purple is necessary to make an impression the greater the intensity of light. The purple is decomposed by the light, and accumulates in the retina in the dark.

It has, however, been proved by experiments on frogs that after the entire decomposition of the purple matter the power of vision still exists. When the optic nerve is cut in frogs and rabbits the reaction is acid, but if the animal be killed after being kept in the dark for forty-eight hours the reaction is neutral or alkaline. The grey substance of the brain and medulla has always an acid reaction; and the white substance of the brain has the same, though weaker. Sczerback has shown from studies in his own person that mental work is accompanied by a decomposition of matters in the brain containing phosphorus, from which phosphoric acid is produced, and phosphates appear in the urine. Kühne has made observations upon the chemical reactions of the retina after being exposed to light. The action of osmic acid on the bacillary layer is not always the same. There are patches which are unequally coloured, apparently because they are rich in cerebrin and the ends of the rods take on a different hue from those which lie near the choroid. He concludes that the cerebrin and lecithin in the retina are decomposed by the action of light into various fatty acids and phosphoric acid. Noiszewski considers this a proof that there is under the action of light a chemical decomposition in the inner matter of the rods or cones, which he calls an explosion. There is also a swelling of the peripheral ends of the rods, so that all interspaces disappear. This change in their physical aspect causes a different reflection. After the explosion the elastic neuro-keratine envelope of the rods and cones contracts, leaving a ring-form fold. He thinks that the force generated by the explosion conducted through the nerve fibres to the brain causes a corresponding explosion in the nerve cells, but this of course is purely hypothetical. He holds that single impressions are sent from each of the cones of the bacillary layer. According to Weber, the smallest angle in which two white streaks can be recognized as two is 73″. Helmholtz could still distinguish two bodies at an angle of 64″; the space occupied by such an angle thrown upon the retina would be 0·00464 to 0·0055, but the breadth of the cones of the retina is according to Kölliker 0·0045 to 0·0055.

https://doi.org/10.1192/bjp.38.161.295 Published online by Cambridge University Press

Here we have a proof that every cone of the macula lutea could give an especial impression distinct from another.

Injury to Musical Capacity with Aphasia.

Dr. L. v. Frankl-Hochwart (quoted in the "Neurologisches Centralblatt," Nr. 21, 1891) describes five cases in which observations were made upon the injury to the capacity for musical expression which accompanied aphasia. In the first case the aphasia was complete, and the patient seemed to have lost the capacity of understanding music; he could only hum the beginning of a few tunes. In the four other cases the patients retained the capacity of understanding words; and in three of these cases the power of speech was lost, and in the fourth, a woman, there was a great deficiency. None of these four patients could sing spontaneously. Of two of them who had previously been good musicians, one could not play any more, the other could only play a melody in part. When the titles of pieces of music were named, they said that they knew them, but they could not play them. Two patients could play from the music book, but they could not sing from it. In all the cases in which speech was lost the musical faculty had also suffered; nevertheless cases have been described by Finkelnburg, Bouillaud, Oppenheim, and Limbeck, where there was aphasia without injury to the musical faculty. Some idiots who cannot speak can sing to a certain extent. There is no case on record where the capacity for musical expression alone was lost; but it is strange why in some cases it is retained, in others injured. The author concludes that in many people the capacity for speech and for musical expression must have centres in the brain lying near one another. Musical expression appears in the child about the same time as speech, and is often lost through disease at the same time. Musical expression should have a double innervation, for both the hands are generally used in instrumental music. According to Anton violinists play the melody mostly with the left hand, and the piano is played by both hands acting at once.

Wry-Neck as a Cause of Deformity of the Skull.

Dr. Hans Kurella ("Centralblatt für Nervenheilkunde," August, 1891) observes that, although much attention has been directed to the pressure of the growing brain upon the sutures in causing deformation of the cranium, there are few studies about the effect which the traction of the muscles have in modifying the form of the skull. The principal of these are the muscles of the jaw, the sterno-kleido-mastoid, and the trapezius. Dr. Kurella presents a case where torticollis seems to have led to asymmetry of the skull. The subject was a shoemaker, aged 46, drunken and brutal, and of low intelligence, who had several times been in prison for theft and assault. The head was bent downwards on the neck towards the left, the chin being turned to the right. This was owing to a fall which he received in infancy. The wry-

https://doi.org/10.1192/bjp.38.161.295 Published online by Cambridge University Press

neck is said to have improved till he was twelve years of age. The right trapezius muscle was atrophied, so that one could feel the splenius capitis below, and the left half of the occipital was broader and stronger, though, on the whole, the left side of the skull was smaller than the right owing to the lesser size of the frontal region. The hard palate was asymmetrical, being broader and flatter on the left. The left auditory meatus of the ear was 20 millemêtres lower than the right. Dr. Kurella considers this deformity owing to the continuous action of the left sterno-mastoid, trapezius, and splenius muscles, which pulled down the petrous portion of the temporal and broadened the arch of the occipital base on the left side. It is interesting that the asymmetry of the base of the cranium had also involved the palate. The fact that the shoemaker was a man of low intelligence might lead to the supposition that the asymmetry of the skull was congenital, but from the history of the case Dr. Kurella is disposed to think this explanation to be excluded.

Another case of asymmetry of the face and skull following wry-neck is described by Greffié in the "Montpellier Médical" (Band xv., 1890). A *resumé* is given in the "Centralblatt für Nervenheilkunde" (December, 1891).

The subject was a man of 20 years of age, who had been received into the hospital at Montpellier for some gastric disorder. The chin was pulled from the right, so that the ear of the left side approached the left clavicle. The left sterno-kleido-mastoid could be traced like a cord of the thickness of the little finger, from its origin from the mastoid process to the sternum. The clavicular portion of the muscle was not visible. The face was quite asymmetrical. The under jaw was deformed, shorter on the left ramus than on the right. The teeth of the under jaw were to the left of those of the upper row, and the left lower lip covered the upper one. The left orbit was wider than the right. The cranium was also asymmetrical, and there was a flattening of the left temple. The man had a cervico-dorsal curvature of the spine, otherwise he was strongly made. His intelligence was normal.

Greffié attributes the asymmetry to the traction of the sterno-mastoid muscle upon the mastoid process. He observes that the earlier the torticollis, the greater is the deformation of the skull and face. In a case described by Broca the asymmetry of the face was much less marked, but the contraction of the muscle had commenced when the patient was two years old, whereas Greffié's case began in early infancy, when the bones were less formed. On this account, when wry-neck occurs in a child, tenotomy should be had recourse to at once.

Is General Paralysis Caused by Syphilis?

Professor Binswanger, of Jena, gives a contribution to this vexed question ("Neurologisches Centralblatt," Nr. 20, 1891.)

https://doi.org/10.1192/bjp.38.161.295 Published online by Cambridge University Press

He maintains that general paralysis is one of the distant consequences of the syphilitic poison affecting the nervous system. It is not to be confounded with the ordinary sequelæ of constitutional syphilis. He admits that there are cases of syphilitic infection which simulate general paralysis, and are curable by anti-syphilitic remedies, but these need not perplex us. He observes that fifty per cent. of the cases of real general paralysis can be proved to have had syphilis. These do not differ either in the symptoms or pathological lesions from the other fifty per cent., in which no such infection can be proved, and, indeed, in many of the general paralytics, who unquestionably have had syphilis, the usual specific lesions are wanting.

Shortening of the Limbs from Inherited Syphilis.

Dr. Albrecht Erlenmeyer ("Centralblatt für Nervenheilkunde," November, 1891) describes a combination of symptoms which he had met with in five patients. Three of them were boys aged 12, 15, and 16 years; two were girls from 15 to 16 years. All these five patients suffered from Jacksonian epilepsy, and it was found that the extremities affected by the convulsions were smaller than on the other side of the body. The arms were shorter by about three centimetres; the legs by about 2·2 centimetres. The differences in circumference reached as high as 2·5 centimetres in the upper part of the arm, and three centimetres around the thighs. The motility of these affected extremities was normal. There was neither paresis nor spastic condition, nor could any abnormality in the muscular reaction to the electric current be ascertained; but both the extremities were weaker than the sound ones on the opposite side. This was especially marked in the left arm of one patient. The feeling of contact was a little duller on the affected side, and there was a weakening of the sensation of the limbs and the sensation of the weight of bodies.

In the boy aged 16 there was hemi-atrophy of the tongue, ptosis, and a slight atrophy of the face on the same side on which the extremities were affected. In the girl of 15 there was a facial paralysis on the affected side. No other symptoms of disturbed nervous power were noticed. It was ascertained that the children had been affected during the first years of life with fever, after which the epileptic attack began. In one of these cases at least it seemed clear that this affection must have been meningitis and peri-encephalitis. Dr. Erlenmeyer attributes the deficient growth of the extremities to the deficient development of the corresponding centres in the brain. He does not think that atrophy on the brain could have at once been the cause of the deficient growth of the limbs and of the convulsions. Jacksonian epilepsy is generally caused by some irritation in the affected brain centres, by syphilitic growth, by a deposit of tubercle, or by a splinter of bone. Assuming, therefore, the existence of some exudation, Dr. Erlenmeyer treated his patients with large doses of

https://doi.org/10.1192/bjp.38.161.295 Published online by Cambridge University Press

iodine salts, and in one case this was followed by favourable results. Both have their beginning in an inflammatory affection of the brain; in the severer form it comes to a sudden hemiplegia, and to epileptic convulsions in the paralyzed limbs, and then to arrested growth, while in the milder form the paralysis is never reached. Dr. Erlenmeyer thinks it likely that the ordinary form of cerebral paralysis in children is more often caused by congenital syphilis than is commonly supposed.

On the Influence of Alcohol on the Organism of the Child.

In the "Centralblatt für Nervenheilkunde," December, 1891, there is a review of a pamphlet bearing this title, published at Stuttgart. The author, Dr. R. Demme, observes that not only in the poorer classes of the population amongst whom he practises, alcohol, in the form of brandy, or beer, or wine, is given to children under the persuasion that it is nourishing, but this notion sometimes prevails amongst better educated classes. Often brandy is added to the milk. The evil effects of this are found to be dyspepsia and chronic catarrh, with acidity of the stomach. In an extreme case in which brandy was given in large doses to a boy of four years cirrhosis of the liver was observed. The general effect of an intoxicating draught upon a child is stupor, lasting from twelve to eighteen hours. Sometimes there are convulsions at the outset. Children who are made to drink spirits in some form are often stunted in growth. Among 27 children whose height was under the average their shortness could be traced in 19 cases to the use of alcohol, and three of them grew quickly when the alcohol was cut off. Dr. Demme compares 10 families who could be designated as drinkers and abstainers (Nichttrinker). The first had 57 children, and of these 25 died in the first month, six were idiots, and five of dwarfish stature, five were epileptic, one boy fell ill of chorea, which in the end led to idiocy, and in five children there were hereditary diseases, hydrocephalus, hare-lip, club-foot. Only 17 per cent. of the children of drunkards were sound in mind and body during the first years of life. Of the 61 children of the abstainers 81 per cent. were normal. Only five of these 61 children died early, four were affected with curable affections of the nervous system, and two suffered from congenital deformities.

---

3. *Retrospect of Criminal Anthropology.*

By Havelock Ellis.

Il Tipo criminale e la Natura della Delinquenza. By Prof. Enrico Ferri. ("Archivio di Psichiatria," Fasc. iii.-iv., 1891).

Prof. Ferri here discusses, in his accustomed broad and luminous method, the question of the criminal type and the nature of criminality. The article will be included in the forthcoming

https://doi.org/10.1192/bjp.38.161.295 Published online by Cambridge University Press