PART III.—PSYCHOLOGICAL RETROSPECT.

Epilepsy.

The study of epilepsy is apparently about to receive an impetus. No one can doubt from numerous observations, and on the authority of Hughlings Jackson, that some epileptiform accessions in organic cerebral affections must be regarded as irritation symptoms of definite cortical areas in the psycho-motor zone. Jacksonian epilepsy we have learnt presupposes that an area of the motor cortical zone is stimulated by some demonstrable lesion—that the muscular contractions of a seizure may be limited to one extremity, or when affecting one side of the body may systematically implicate groups of muscles in a measure corresponding with the localization of successive cortical areas—the commencing excitation of one centre being carried on to its neighbour; also that the path of this cortical stimulation must proceed from the brain along the pyramidal tracts. But von Monakow (Experimentelle und pathologisch. anatomische Untersuchungen, Arch. f. Psych., Bd. xxvii., Hft. 2, s. 409) instances a case of unilateral epileptiform seizures, evidently of Jacksonian type, in which, however, not only had the cortical motor centres lost all inceptive function, but the transmissive function of the pyramidal tracts of the affected side was also in abeyance. The case he describes was one of cerebral hemiatrophy, with complete destruction of the pyramidal bundles of one side. Winkler (Ned. Tijd. v. Geneesk., No. 7, 1895) instances a similar case and expresses his belief (without, however, venturing on an explanation) in the possibility of its occurrence. How these phenomena can under such circumstances be substantiated is a problem which if elucidated will go far to threaten the basis of our knowledge of cortical motor functions—but the elucidation is required.

The surgical treatment of epilepsy is directed either peripherally (as in the removal of some distant irritating cause) or centrally. The former we have to deal with in cases of reflex epilepsy, and though we still are enveloped in doubt as to the nature of the affection, and though results of operative interference are frequently unsatisfactory, the adoption of some remediable surgical procedure should never be neglected in suitable cases. In the latter the operation may be limited to the cranial coverings, or extended to the skull as craniectomy either by trephining or by temporary osteosection, or to the incision or extirpation of the dura or to excision of a portion of the cortex itself. The last-named operation, which appears to be the most radical of all, has, up till recently, when adopted in cases where no coarse demonstrable pathological change existed, not been attended with permanent or satisfactory results. In the non-cortical operations

https://doi.org/10.1192/bjp.41.175.724 Published online by Cambridge University Press

the results, such as they are, must be regarded as due to indirect causes only, *e.g.*, by improvement of the circulation through diminution of pressure, etc. A more round-about way of inducing this circulatory change was the adoption of ligation of the vertebrals, extirpation of the superior cervical ganglion, etc, but these need not seriously be considered. Eulenberg (Berl. Klin. Wochenschrift, 1895, No. 15) has published a case of epilepsy in which cortical excision was adopted, the resultant effect of which (a seven months cessation of fits) is the best thus far recorded. The case was one of idiopathic epilepsy, commencing at the age of 11, which, though with occasional remissions, had latterly induced certain psychic and physical deterioration. The attacks invariably began in the right arm, spread over the right half of the face and the right leg, and culminated in general tonic spasm. There being some hypersensitiveness of the brachial plexus, the nerves supplying the upper extremity were first of all stretched. As this gave no favourable result Eulenberg extirpated the left cortical arm centre. On the evening of the day of operation the patient could still move the arm, but on the following morning there was paresis of the right hand, right forearm and right angle of mouth, which after an existence of ten days all vanished again. Sensory and vasomotor thermic disturbances persisted for some longer time in the right upper extremity. The healing of the cranial wound was delayed by extensive bone-necrosis. The attacks, as noted above, remained in abeyance for seven months, then recurred and were ushered in by tonic contraction of the right angle of mouth, so that the pre-existing epileptogenetic irritation-cause appears to have shifted to the face centre—but this was possibly due to cicatricial irritation. As deductions from this case and from two others, in one of which trephining alone, and in the other an incision into the dura was made, Eulenberg discusses at length the indications for the cranio-cerebral surgical treatment of epilepsy. The general drift of his conclusions is that such interference is warrantable whenever indications (*e.g.*, traumatic cause, a probable epileptogenetic area or a circumscribed zone of cortical implication) point thereto. Without binding himself to any hard-and-fast rules, however, he deems it desirable to individualise and carefully study each case before deciding as to operative measures.

Mingazzini (Rivista Sperimentale di Freniatria, Dec., 1894) has recently carefully noted certain phenomena of epilepsy, which though previously described by Bonneville, Briçon and other writers, have not been so generally recognized. He classifies these phenomena into two groups, "fenomeni circumcursivi" and "fenomeni rotatori." The former includes a description of one or more circular movements by the epileptic which may occur either as a motor aura (the patient describing involuntarily by walking one or more larger or smaller circles, the attack ensuing directly after) or as the sole motor manifestation of the seizure (there being no convulsive exhibition, but merely a sudden or gradual onset of stupor from which the

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patient speedily recovers). While the duration of this "circle stage" when developed as an aura is very variable (3 to 30 mins.), its period when it takes the place of a fit is never more than one or two minutes. The direction of the circle in different attacks in the same patient is not always the same, and the loss of consciousness is not always to the same degree. While some patients during their circumambulation avoid obstacles put in their way, others would stumble over them, and at times certain automatic acts were performed, *e.g.*, the collection of objects from the floor, etc. As "fenomeni rotatori" Mingazzini describes rotatory movements in the long axis of the body. These, too, may either be premonitory of the convulsive stage, as an aura, or take the place of a fit altogether. Here also there may be noted in one individual a variation of these purposeless motor acts, the rotation being sometimes from right to left, at others in the opposite direction. In those cases in which the rotations were auræ, other auræ (sensory) were in nearly every instance noted. Noteworthy, too, is it that in two cases where the aura was unilateral (paræsthesiæ of an extremity and visual hallucinations of one side) the rotation took place in a direction away from the side on which the sensory aura occurred. All these varied manifestations appeared more or less constantly in each case observed, and Mingazzini regards them as due to an unilateral cerebellar ischæmia, and he especially dismisses from consideration any permanent pathological change (*e.g.*, sclerosis or atrophy) from the fact that in one and the same patient in different attacks the circular movement or rotation may occur in either direction.

The Treatment of Mental Affections by Bacteria Products.

That some psychoses show amelioration under the influence of intercurrent febrile disorders (*e.g.*, typhus, malaria, recurrent fever, or the acute exanthemata) is an old and well established dictum. From a review of two hundred cases of this description collected and studied by Wagner von Jauregg (Wiener Med. Wochenschr., Feb. 28, 1895), it appears that cure or improvement will most probably ensue when the subject is not too far advanced in years and when the mental affection has not existed for too long a period, though cases of old standing insanity have been recorded in which recovery ensued under these conditions. This curative action of febrile disorders on insanity stands on a level with the therapeutic action of other affections on certain diseases, notably those of nervous type, *e.g.*, the effect of malaria on epilepsy, of small-pox on optic nerve atrophy (Mauthner), of typhus on progressive muscular atrophy, etc., and further to elucidate the matter we must bear in mind that various infective disorders (*e.g.*, influenza) are capable of inducing organic changes in the nerve-elements, changes which may be readjusted by a regenerative process in these elements. By this de- and re-generation the elements may, it can easily be surmised, be so favourably modified that the physical malady which expressed itself in a.

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