Abstracts.

Neurology.

NEURO-ANATOMY AND NEUROPHYSIOLOGY.


The red nucleus represents a particular evolutionary landmark in the scale of phylogenesis in virtue of its characteristic histology and of its connexions with other centres in the neuraxis. In cats and rabbits a large-celled palaeo-encephalic part predominates. In man this is represented only by a slight remnant, while the small-celled neo-encephalic part makes up practically the whole of the nucleus. Consequently, the pathology of this system is quite different in man and animals respectively. The physiology of the large-celled part is controversial; many observers regarding its destruction as producing a rigidity corresponding to that of decerebration, while others think this is simply due to an irritation which passes off in a short time. In man its significance is quite uncertain. Experimental lesions of the small-celled zone result in contralateral hypotonia. In isolated affectation of the red nucleus in man there is not generally any trace of the hypertonic symptoms of decerebration, and in patients showing this the nucleus is found almost always intact. The red nucleus in man is to be considered essentially as a centre of transmission and systematisation of cerebellar impulses regulated by influx from the cortex, globus pallidus, and thalamus. The slight contralateral hypotonia may be explained either by contributing to the red nucleus a definite tonic function or regarding it as one of the mechanisms in a cerebellar syndrome which together with a gross paralysis of the third nerve constitutes a clinical picture characteristic of unilateral destruction of the nucleus.

R. G. G.


This is a long and elaborate morphological study of the landmarks, micro- and macroscopical, of the upper temporal surface, forming the lower boundary
of the fissure of Sylvius. They are described with the greatest minuteness and form an indispensable preliminary to study of the same region in pathological cases. The paper is fully illustrated with drawings and photographs.

S. A. K. W.

[123] Observations on unilateral 'thalamus cats' and 'striatum cats'
(Beobachtungen an halbseitigen Thalamuskätzchen und Striatumkätzchen sowie nach halbseitiger Exstirpation des Frontal oder Occipitalpoles).

A 'striatum cat' is one from which the cortex has been removed with preservation of the corpus striatum; a 'thalamus cat' has its thalamus as well.

Immediately after unilateral removal of the cortex the animal moves in a circle towards the opposite side, but, within two or three days, to the same side. Thereafter it moves as at the beginning only when its eyes are covered. When only the frontal pole is cut out this movement in a circle to the opposite side is very pronounced if the eyes are closed.

If the occipital pole is extirpated progression is mainly to the same side as the lesion. Unilateral removal of the cortex is followed by a spastic paralysis with great extensor rigidity, but after a time only a paresis remains. On removal of the frontal pole alone the same results follow as those after complete cortical resection—so far as concerns tonus and movement.

Some of the unilateral thalamus and striatum cats exhibited for a few days after operation a tremor of the opposite limbs at the commencement of movement. Hyperkinesis succeeds operations removing the frontal cortex, also those producing the thalamus and striatum cat respectively. It is not seen after operations confined to the occipital cortex. The extensor tonus of unilateral thalamus cats appears to be greater than that of unilateral striatum cats.

S. A. K. W.

NEUROPATHOLOGY.


In cerebral apoplexy it is necessary to distinguish between the häemorrhage from a large vessel and hemorrhages from the small vessels in the adjacent area. (1) The large häemorrhage is caused by the rupture of a vessel and is dependent on an atheromatous ulcer of local nature which bursts, according to the conception of Rühl, with outflowing blood forcing its way into the tissue and causing mechanical injury. (2) Small vessels in the adjacent areas with altered walls and also small vessels without alteration may thus be caused to rupture. (3) In addition there is ischaemia in some parts of the environment with consequent necrosis of the vessel walls and of the brain tissue; moreover,