

*Functions and Diseases of the Frontal Lobe in Man* [*Leistung und Erkrankung des menschlichen Stirnhirns, 1 Theil, Graz, 1902*]. (Reported in *Neurol. Cbl.*, Oct. 16th, 1902.) Anton and Zingerle.

There are still many unsolved questions about the functions of the frontal lobe; most investigators think that it contains centres for the muscles of the head and trunk, while Munk places them on the convexity of the hemispheres, and Horsley on the median plane of the marginal gyrus. It seems certain that in front of the sulcus præcentralis there are centres for the movements of the eye. The frontal lobe has an influence on the maintenance of the bodily equilibrium.

In their laborious study of the histology of this lobe the authors have found that the structure of the frontal lobe is not different from that of the other lobes. The great mass of the association fibres lies laterally to the ventricles; the projection and commissural fibres nearer to the middle line. There are regions in the frontal lobe in which the fibres of the corona radiata are scanty. Hence impairment of associations may be explained. The authors point out that injuries to the frontal lobe are frequently followed by atrophy of the opposite side of the cerebellum.

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*On the Localisation of Cerebral Hemianæsthesia* [*Zur Localisation der cerebralen Hemianästhesie*]. (*Neurol. Cbl.*, No. 21, 1902.) Schaffer.

Dr. Schaffer observes that there are centripetal nerve-tracts which end in the optic thalamus, from which another neuron issues which passes to the cerebral cortex. From a case of hæmorrhage of the thalamus studied by Probst, it appears that the thalamo-cortical neuron passes through the lamina medullaris externa to the side of the inner capsule, and, lying close to the ganglion lenticularis, reaches the median convolutions, the parietal lobes, and the gyrus fornicatus. Those fibres which go to the occipital lobe spring from the pulvinar and disperse in the stratum sagittale externum. Probst's results agree with those of Flechsig. According to Déjerine and Long, there is no distinct sensory system in the posterior limb of the inner capsule; the fibres which go to the cortex, as well as those going to the thalamus, mingle with the fibres of the pyramidal tract, which, beginning in the knee, spread to the retro-lenticular segment of the inner capsule. Hemianæsthesia occurs under two conditions—(1) a lesion of the thalamus opticus which may affect the ganglion in the passage of the fibres either on the bulbar or cortical side; (2) when the conducting tract between the thalamus and the cortex is affected, the thalamus remaining intact. In this case the lesion is of an extensive character.

Observations made both by the clinical and experimental methods prove that the motor functions, the cutaneous sensibility, and the muscular sense are localised in the same parts of the cortex—that is, in the motor zone, which ought to be called the sensori-motor zone.

Dr. Schaffer then gives a description of a case of hemianæsthesia, a labourer, æt. 18 years, who suffered for above a year from complete motor and sensory paralysis of the left half of the body. The loss of sensation, which approached the middle line, was complete. The sense

of position was wanting in the whole left side. The special senses were unaffected, but the intelligence was diminished, the patient answering questions sluggishly and in short phrases.

On examining the brain there was found softening of the right hemisphere extending from the posterior limb of the Sylvian fissure over the lower part of both median gyri to the first temporal. This softening dipped inwards to the head and body of the nucleus caudatus and the anterior limb and knee of the inner capsule. This had brought about atrophy of the thalamus opticus, which was not directly affected by the softening. There was also a descending degeneration of the pyramids implicating the pons, medulla, and lateral columns of the cord.

The degeneration was most marked in the dorso-lateral nucleus of the thalamus, showing that the cortico-thalamal neuron was affected. The professor observes that the lesion was confined to the motor portion of the inner capsule, while the back part of the posterior limb was free, although this tract, according to Charcot, conducted sensory nerve-fibres. In this case, while only the motor portion of the inner capsule was destroyed, there was hemiplegia with decided hemianæsthesia.

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*Hypertrophy of the Brain with Alterations in the Thymus and Supra-renal Capsules [Wahre Hypertrophie des Gehirnes mit Befunden an Thymus und Nebennieren]. (Neurol. Cbl., Oct. 16th, 1902.) At the Meeting at Karlsbad in Sept., 1902. Anton, Obersteiner, Stekel.*

Dr. Anton, of Graz, described a patient who was of a neurotic heredity, had severe attacks of epilepsy, but no symptoms of cerebritis, although there was a certain slowness in spontaneous movements. The intelligence was always good. He died at the age of twenty years in the status epilepticus. The outer vault of the skull was found to be as thin as paper, and even the bones of the base of the cranium were wasted. The occipital curve was flattened. The brain was of strikingly large size, and weighed not less than 2055 grammes. It was thus one of the heaviest on record. The hypertrophy was general, the proportions of the parts being preserved. For example, the cerebellum was 11 *per cent.*, as in the normal brains. The fissures were very deep, but the proportion of the grey and white substance was normal. There was some hydrocephalus internus, though not considerable. The thymus gland was larger than usual; its blood-supply came directly from the innominate artery. The muscular tissue of the heart was degenerated. Anton thinks that this might be the sequel of immoderate dosing with bromides. The supra-renal capsules were invaded by cysts so that the central substance was quite destroyed; the cortical substance remained, though pathologically altered.

Dr. Anton observed that persistent maintenance of the thymus gland and degeneration of the supra-renal capsules are frequently observed along with abnormal brains. In these cases, the cerebral functions are generally impaired. We do not know what relations these alterations