

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

nave to one another. We should bear in mind the powerful constricting capacity of the supra-renal capsules, which might become the cause, not only of monstrosities, but also of other brain diseases, such as congenital hydrocephalus.

Dr. Obersteiner observed that hypertrophy of the brain is a very rare disease. He had a case of it in a boy æt. 8 years. There was no great impairment in intelligence. The brain, without the fluid of the ventricles, weighed 1920 grammes.

Dr. Stekel stated that he had observed in migraine a lowering of temperature to occur with some regularity. The same declension was observed in a case of sarcoma affecting the supra-renal capsules. He holds that the condition of the supra-renal capsules had a significance in migraine.

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### 3. Physiological Psychology.

*A Criticism of the Applicability of Plethysmographic Curves in Psychological Questions [Zur Kritik der Verwendbarkeit der plethysmographischen Curve für psychologische Fragen]. (Zeit. f. Psychol. u. Phys. d. Sinnesorgane, H. 5 and 6, 1902.) Müller, R.*

This lengthy and able paper presents an interesting study of the historical evolution of the plethysmograph, and then discusses the interpretation of its results. Lehmann's plethysmograph was used. Müller is not, however, like Lehmann, prepared to admit a psychological interpretation of plethysmographic curves, but considers that at present such interpretations are in a high degree confused and uncertain. However simply the plethysmogram may be obtained, its interpretation presents complex possibilities of error which involve some of the most debated points in the mechanism of the pulse. We are therefore yet far removed from the time when we shall be able to give a settled representation of the relations between psychic and circulatory processes. The schemes of C. Lange, Lehmann, and others are, Müller believes, without justification. Before we can take psychic elements into consideration we have, he argues, three different orders of physiological waves to allow for in interpreting the curve of the volume of the pulse: (1) the pulse-wave proper; (2) respiratory waves, and also waves which correspond to, and perhaps are, Traube-Hering waves; (3) S. Mayer's waves, which are of longer periodicity than the Traube-Hering waves. These waves are discussed at some length, and Müller severely criticises the statement of Lehmann that "those oscillations of the pulse which do not depend on the breathing or on muscular movement are of psychic origin." The paper deserves careful study by all who are interested in the psychological applications of the plethysmograph. It by no means follows, however, that the necessity of recognising waves of infra-cortical origin in the plethysmographic curve altogether invalidates psychological interpretations.

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