

*On the Occurrence of Transmissible Sleep-producing Substances in the Brains of Sleeping Animals* [Ueber das Vorkommen von übertragbaren schlaf erzeugenden Stoffen im Hirn schlafender Tiere]. (Zeitschr. f. d. ges. Neur. u. Psychiat., vol. xclvi, p. 208, 1933.) Kröll, F. W.

The author found that from brains of animals in whom sleep had been induced by pharmacological means (pernocton, urethane), by physical means (Leduc's current) or by intraventricular calcium injection, as well as of those hibernating (physiological), substances could be isolated which by intravenous or intrathecal injection into other animals could produce sleep in them. These substances occurred in an aqueous extract of the brains and in an aqueous acetone-residue (*Rückstand*). The effective dose was variable. Some animals showed normal sleep with its characteristic reactions, a smaller number exhibited very deep sleep. Injection of extracts from hibernating animals produced in cats (but not in monkeys) sleep lasting several days, closely resembling hibernation, even in its metabolic changes. Chemically these substances are akin to those isolated by Legendre and Piéron and by Pighini (*Ermüdungsstoffe*, hypnotoxins); they are soluble in water, insoluble in alcohol and thermolabile. They differ, however, from the hypnotoxins in that they can only be isolated during sleep, whereas the latter are found in waking, artificially fatigued animals. The substances could not be isolated from any organ except the brain.

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## 7. Pathology and Biochemistry.

*The Cerebral Circulation. XXVI: Cerebral Anæmia.* (Amer. Journ. Psychiat., vol. xiii, p. 947, March, 1934.) Cobb, S.

It has long been held that the cerebral arteries are all end-arteries, and do not anastomose. It has also been held that these arteries have no vasomotor mechanism. Recent investigations have shown that both these views must be revised. A case is reported of a patient who suffered from typical Jacksonian convulsions of the right side, which resulted in *status epilepticus* and death. The autopsy showed no softening, nor any gross lesion of the brain, but the cortex of the left motor area showed slight pallor. Histologically the nerve-cells in this region showed early anæmic necrosis. It is argued that partial anæmia is more likely to cause fits than complete anæmia. It is also urged that a small focal area of such anæmia is more likely to produce *status epilepticus* than a large one.

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*Concerning Pick's Disease.* (Amer. Journ. Psychiat., vol. xiii, p. 936, March, 1934.) Kahn, E., and Thompson, L. J.

The clinical features and pathological findings are reviewed. Two types of the disease have been described, one characterized by dementia with aphasia and the other by dementia alone. Differentiation from Alzheimer's disease presents a difficult problem, no one symptom or finding being characteristic of either disease. Usually the onset of memory defect is earlier and more widespread in Alzheimer's disease. Encephalograms give valuable diagnostic aid. In Alzheimer's disease broad stripes of air are shown over the whole convexity, while in Pick's disease the air is almost exclusively in the frontal and temporal regions.

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*Megalencephaly.* (Journ. Neur. and Psychopath., vol. xiv, p. 193, Jan., 1934.) Wilson, S. A. K.

Megalencephaly the writer defines as a hyperplasia of the whole brain associated with mental or nervous abnormality. The overgrowth is accompanied by a definite cytological defect, which does not correspond strictly to the chronic cell degeneration of Nissl. There is no histological evidence of toxi-infective or toxi-degenerative processes.

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