

30 *per cent.* appear to have been defective or psychotic before the tumour developed. The average age was fifty, which is considerably higher than that for brain tumours in general; 68 *per cent.* of the cases occurred between the ages of forty and sixty, whereas in general practice over 50 *per cent.* occur between twenty and forty, and there are many under twenty. Reasons why in asylums so few tumours are diagnosed are that more attention is paid to the psychiatric than to the neurological aspects of the cases, that ophthalmoscopic examination is not made as a routine measure in organic cases, and that, as most of the patients are middle-aged or elderly, there are frequently complicating factors, mental and physical, that in younger persons would be absent. In elderly people brain tumours may reach a large size without giving characteristic signs; the senile brain atrophy counter-balances the tendency to increase of intracranial pressure, and at this age the tumour is commonly of slow growth. In brain tumour in asylum patients of middle age the usual predominating symptoms are simple deterioration and apathy, especially in frontal tumour, but also in tumours of other regions. In a predisposed person a brain tumour may set up an independent psychosis. Attempts have been made by some authors to correlate particular mental symptoms with tumours of different regions, but the very thing that is most striking about this series of cases is the fact that they do not present clear-cut psychiatric pictures.

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4. Pathology.

Anatomo-pathological Study of Nervous Centres in a Case of Congenital Myxœdema with Cretinism [Étude Anatomo-pathologique des Centres Nerveux dans un cas de Myxœdéma Congénital avec Crétinisme]. (*L'Encéphale*, November, 1920.) Marie, P., Tretiakoff, C., and Stumfer, E.

There is a discordance between the intensity of the psychical troubles due to hypothyroidism and the apparent integrity of the encephalon which impedes our knowledge of the mode of action of humeral troubles on the psychical centres. The examination of the encephalon of a patient suffering from congenital myxœdema with cretinism (a woman who died *æt.* 36) revealed the existence of diffused and marked lesions, consisting in an intense infiltration of the vascular coats by iron compounds. These can explain, partly at least, the psychical troubles, and they also establish a relation with thyroid insufficiency.

The lesions affected the vessels of all the white matter of the cerebellum, the olives, and those of the lenticular nucleus on both sides. They consist in a great infiltration of the coats of the vessels of great and medium calibre, but especially of the capillaries, by an amorphous, sometimes granular substance coloured violet-black by hæmatin. Ferro-cyanide of potash with hydrochloric acid gives an intense blue colour, showing the existence of iron compounds. Very little calcium was present. Polychrome blue showed the deposits coloured an intense black and was the best method.

The authors conclude that the deposit is due to hypothyroidism, and as the woman was so young, the deposit mostly of iron and not calcium compounds, and the site unusual, it was not a precocious arteriosclerosis. Oxidation, one knows, is poor in myxœdema, and iron plays an important part in oxidation. The precipitation of iron compounds would fit in here. Here one could equally well recall the general chromatolysis in the nervous system noted by Mott and Brun in three cases of hypothyroidism, and the part iron plays in the constitution of the Nissl granules according to Scott. Marinesco also states that considerable quantities of iron occur in nerve-cells. The authors also think that the cerebellar symptoms described in cases of myxœdema by Odien are explained by their present discovery. The psychical troubles of myxœdema are explained by the retardation of the phenomena of nutrition of the nerve-elements, also perhaps by the affected vessels causing bad nourishment of the tissues. The great mental variations between one patient and another could in a certain measure be explained by the intensity of the vascular lesions and their locality. Two good plates of microscopical appearances are given.

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The Changes in the Central Nervous System in Spotted Fever, and their Significance for the Histopathology of the Brain Cortex [Die zentralen Veränderungen beim Fleckfieber und ihre Bedeutung für die Histopathologie der Hirnrinde]. (Arb. für Psychiat. München, Bd. i, 1919.) Spielmeyer, W.

In 1913 Fränkel announced that the anatomical basis of the skin spots in this disease is a necrosis of circumscribed and mostly sector-shaped portions of the intima of the smallest arteries, and that, at the place where the vessel is thus affected, there is a perivascular infiltration in the form of a clump of cells, mostly descendants of adventitial and periadventitial connective-tissue cells. In 1914 he described similar punctate lesions in internal organs, especially the brain, myocardium, liver, and gastro-intestinal tract. Spielmeyer has investigated the changes in the brain and spinal cord in twelve cases, and in this paper (54 pages, 10 plates) he gives a description of the microscopical appearances. The lesions fall mainly into three groups—foci, infiltrations around vessels in the substance of the brain and cord, and cell-deposits in the finer membranes.

(1) *Foci*.—These are the lesions whose resemblance to the skin spots attracted Fränkel's notice. They are spherical or oval, rather sharply demarcated from their surroundings, and mostly about 0.1 mm. in diameter, though often smaller. The places where they chiefly occur are, in order of preference, the deeper parts of the pons and medulla, the molecular layer of the cerebellar cortex, the basal ganglia, the cerebral cortex, and lastly the spinal cord; they are never found in the pia. In the brain they occur chiefly in the grey matter; there are not many in the white matter, and in the centrum ovale they are rare; they are occasionally seen in the white matter of the convolutions, but then usually impinge on the cortex. The foci in the cortex of the cerebrum lie mostly in the middle layers, and are fewer in the occipital than in other cortical regions. In a Nissl section