(1) To the present well known types of symptomatic migraine we may add a new type of migraine in "Thurmschädel" (Towercranium) and in other forms of craniostenosis. (2) In a great number of forms of migraine the cause is due to continuous disproportion between cranium capacity and the contents of the cranium. (3) Such a disproportion is the anatomic foundation in genuine migraine and indeed an abnormal size of the brain is the fault of this disproportion. (4) X-ray examination in cases of genuine and symptomatic migraine is of great diagnostic importance. By this method we are enabled to ascertain the various pathological conditions of the cranium. Schüller's interesting article is worthy of careful perusal and thoughtful consideration.

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THE SUBSTANTIA NIGRA SOEMERINGI. Julius Bauer (Arbeiten aus dem Neurologische Institute an der Wiener Universitet, XVII. Bd., Heft III., 1909).

Bauer in his interesting monograph discusses first the literature of this subject; secondly, he gives a detailed description of the anatomy of substantia nigra of forty-seven animals, including the elephant; thirdly, he refers to the pigment of substantia nigra. His thesis is that substantia nigra exists where pes pedunculi are present, this being true of all mammals. The cells of substantia nigra and those of substantia reticularis are difficult and almost impossible to differentiate anatomically in the lower mammal. Phylogenetically the cells of substantia nigra develop from the cells of substantia reticularis as soon as the radiations of the forebrain make their appearance on the ventral surface of the mid-brain, and with the development of cortical control over almost all nervous functions. Through substantia nigra impulses are conveyed from the higher centers to the tegment. In the lower vertebrates radiations also exist from the forebrain to the caudal part of the central nervous system, but these radiations lie in the mid part of the tegment. Here also the cells are thickly accumulated around these radiations, and form the so-called nucleus *entopeduncularis* which Bauer found a homologue in the substantia nigra in the mammal. The dark pigment of the cells in substantia nigra is melanin. It is to be remembered that melanin is the result of a specific oxydative ferment action on certain cyclic splitting products of albumin. Likewise, in the central nervous system in the human body—in substantia nigra, locus cœrulus, dorsal nucleus of vagus, and spinal ganglia—such an oxydative ferment and similar aromatic substances should be found at a certain age.

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