Current Literature

I. VISCERAL NEUROLOGY

1. VEGETATIVE NERVOUS SYSTEM.

Depisch, F. CONTRIBUTION TO THE PATHOLOGY OF THE VEGETATIVE NERVOUS SYSTEM. [CASE OF BULBAR DISEASE WITH HEMIIRRITATIO VEGETATIVA. Wiener Arch. f. klin. Med., Vol. I, 1920.]

Anamnesis.—Forty-two year old woman patient with tuberculosis heredity. Had pleuritis fourteen years ago. A chronic polyarthritis set in nine years ago. The last few years the left cheek has been redder than the right. Since that time also there have been attacks of vertigo. Urinary trouble. Pronounced slowing of pulse as though in seizures.

Summary of the status after three quarters of a year of observation showed the following symptoms in addition to the chronic polyarthritis: 1. Reduction of skin temperatures of the trunk and left extremities (average reduction of 1° C.). 2. Increase in skin temperature on the left half of the face and dilatation of the left retinal blood vessels. 3. Increased sweat secretion on the left side. 4. Reversed Horner symptom complex on the left. 5. Increased secretion of saliva on left. 6. Increased tear secretion on left. 7. Signs of vagus irritation. 8. Signs of heart sympathetic irritation (vagus paralysis?). 9. Vertigo from left to right. 10. Headache in the left occiput. 11. Increased tonus of the sphincter vesicae? 12. Slight increase of the patellar reflex on the right and indication of Babinski on the right. 13. Mild ataxia of the left upper extremity. 14. Temporary weakening of the left abdominal reflex.

Epicrisis.—Signs 1, 3, 4, 5, and 6 are undoubtedly the expression of a semilateral irritation of vegetative nerves. In phenomena 2, 7, 8 and 11, this can only be suspected. The locus of the original disease must be in a central position on account of the marked hemilateral distribution of the phenomena and on account of the involvement of the entire left half of the body. The otological examination made by Fremel showed "an organic lesion in the region of the left Deiter's nucleus." All the patient's manifestations, with the exception of one and three, can to the best of our knowledge be explained by such a focus in the left half of the medulla. According to Babinski, Senator, et al., the vegetative disturbances are observed on the side of the focus in the head region in hemilateral medulla foci, they are contralaterally located on the trunk and extremities, or on the side of motor disturbances. Whether in our

case all the manifestations are to be explained by the one left sided focus, which must certainly be present, or whether possible a second focus must be assumed on the right side which only irritated the vegetative pathways for the trunk and extremities can certainly not be decided. We consider the first assumption to be the more probable. From literature pertaining to the writer's case, as well as to an unpublished case of Dr. Pappenheim's we come to the following conclusion in regard to the central fiber course of the vegetative pathways, especially in regard to their crossing.

- i. In man the vegetative pathways from the cerebrum continue downwards through a crossing.

2. The crossing has been followed to the lowest sections of the cervical spinal cord.

3. The crossing for the path for the eye sympathetic and the vasomotor and sweat pathways of the face may be traced between the inner capsule and the pons.

4. The crossing of the vasomotor and sweat gland pathways of trunk and extremities seem to be situated in the upper sections of the medulla oblongata. [Author's abstract.]

Boeke, J., and Dusser de Barenne, J. G. THE SYMPATHETIC INNERVATION OF THE CROSS-STRIATED MUSCLE FIBERS OF VERTEBRATES. [Proc. Koninkl. Akad. v. Wetenschappen te Amsterdam, 1919, xxi, 1227 (2 figs.).]

Some years ago Boeke showed that on the cross-striated muscle fibers of reptiles, birds and mammals there existed, besides the usual motor end-plates, a second set of hypolemmal nervous end-organs, very fine and delicate, which are seen in Bielschowsky preparations as very small neurofibrillar end-rings and small end-nets, lying on the surface of the muscle fibers at the end of fine non-medullated nerve-filaments. These so-called "accessory" nerve-endings lie hypolemmally on the muscle fibers embedded in the granular sarcoplasm of the fiber, and in some cases are found in the same layer of granular protoplasm which surrounds also the terminal ramifications of the common motor end-organ; in other cases they are found as separate endings, lying embedded in a distinct layer of nucleated sarcoplasm independent of the motor sole, but, as far as could be made out, they always appear as hypodermal structures. The non-medullated nerves that have these end-organs attached to their terminal nerve-ramifications, are seen running in bundles between the muscle-fibers, remain amyelinic throughout their whole course, and seem to form a distinct system of nerve-fibers, independent of the motor and the sensory nerves. These facts suggested the sympathetic nature of these nerve-fibers, but it was concluded that the cross-striated muscle-fibers are innervated both by the spinal nerves and the sympathetic system. The end-organs just mentioned were found in