region, or else in the cerebellum. Exact surgical intervention is dependent upon the latter. [Author's abstract.]

Ellis, R. S. A QUANTITATIVE STUDY OF THE PURKINJE CELLS IN HUMAN CEREBELLA. [Journal of Comparative Neurology, Vol. 30, No., February 15, 1919.]

In this communication there is presented the results of a study whose main purpose was to show the numerical differences in Purkinje cells in normal, subnormal and senescent human cerebella. To obtain averages the cerebella of four human beings in the prime of life were obtained at autopsy in a general hospital. This gives a close approximation to the condition present in the average cerebellum as it appears in the hospital population, a group probably somewhat below the average for the community at large in the development of the nervous system. Nine cerebella from mental defectives were selected, while from subnormal infants six specimens were examined and the cerebella of five old people were studied as examples of senescent brains. During these studies the cerebellum from a man suffering from paresis was obtained and is included as an example of what may happen in this condition. In cases of extreme mental defect due to agenesis or to the early action of toxins during intra-uterine life, there is an evident deficiency in the number of cells. Similar reductions are found in senescence and paresis. In the subnormal cerebella the evidence indicates that the normal number of cells has never been present in a developed form. In the senescent and paretic cases, however, the small number is due to disintegration. The anterior lobe of the cerebellum shows the greatest deficiency in cells in both the subnormal and senescent cerebella, while the biventral lobe shows the greatest variation in both types of cases, in some greatest loss and in others the least loss. The differences between the two hemispheres average less in subnormal than in normal cerebella. This probably has a relation in the differences in the degree of unilateral dexterity found in normal and subnormal individuals, *i.e.*, the former are usually distinctly right or left handed as compared with the subnormal who tend to be more ambidexterous. The deficiency in cell numbers affords some explanation of motor defects found in subnormal individuals. It shows also that in idiocy and imbecility we may expect to find the whole brain defective rather than the frontal lobes only, while the higher grade of defectives (morons) probably show very slight deviation from the normal.

Eagleton, W. P. CEREBELLAR ABSCESS. [Journal A. M. A., Oct. 4, 1919.]

Eagleton discusses the surgical treatment of cerebellar abscess, and deduces the following conclusions. The distribution of intracerebellar and intrapial arachnoid abscesses in all parts and on all surfaces

of the cerebellum, although 62 per cent. originate from the petrous pyramid, require that uniformly to allow of systematic exploration of the cerebellum and to institute proper drainage, it is necessary in all cases: (1) To obliterate and doubly ligate the descending portion of the lateral sinus. The sinus, no matter how large, may be quickly obliterated and ligated by invulsing the external wall into its cavity. The reason for exploration from in front of the sinus is that here is the least danger of herniation, because of its being in the direction of minimum intracranial pressure from the cerebrospinal system circulation. The cerebrospinal fluid passing through the aqueduct of Sylvius and into the fourth ventricle with lateral communications to the basal cisterna, exerts direct pressure on the cerebellum, forcing it backward and upward. If now incision of the dura is over the lateral lobes of the cerebellum (behind the sinus), herniation of cerebral tissue immediately follows, while an incision in front of the sinus, being over the site of the minimum intracranial pressure, evacuates considerable cerebrospinal fluid but is less likely to be followed by herniation. (2) To expose the dura of the whole cerebellar fossa of the affected side; and, as the affected hemisphere occupies a position beyond the median line, the bone over the unaffected hemisphere should be freely removed. (3) To perform a ventricular puncture in order to relieve the internal hydrocephalus. (4) Then to incise the dura as far forward as possible, the incision extending outward through the obliterated sinus and continued in whichever direction necessary. Because of the variety of situations of cerebellar abscess as found at postmortem, no other surgical manipulation promises to focus the abscess uniformly or allow of its complete evacuation, and the introduction of drainage material within the abscess itself.

Albo, W. L., and Hormaeche, D. G. CEREBELLOPONTINE ANGLE LESIONS.
[*Medicina Ibero*, July 5, 1919. J. A. M. A.]

These authors remark that they could find only one article on this subject credited to a Spanish author among the 300 articles they consulted. They have encountered at the public hospital of Bilbao four cases of lesions pressing on the cerebellopontine tissues. The patients were three men between twenty-nine and thirty-two and one woman of twenty-four. The disturbances may be ascribed to trigeminal neuralgia at first, and it is important to examine with minute care the functions of the fifth, sixth, seventh and eighth nerves. In their cases the evacuation of the pus in the one case of cerebellopontine abscess was followed by a complete cure, but two other patients given operative treatment succumbed to respiratory paralysis. Treatment for syphilis had been pushed in some of the cases but no benefit was apparent. In one of the operative cases a cerebellopontine extension of a tumor in the left half of the cerebellum had been assumed, but the space was