A review of current neurosurgical literature from all over the world emphasizes the fact that neurosurgery as a specialty is no longer limited to the universities or large metropolitan areas. Articles on the subject appear from almost every country on the globe, and many of these countries, however small, have one or more journals devoted, if not to neurosurgery alone, then at least to the more general field of neurology. Whereas by far the major portion of neurosurgical practice in the United States is in the hands of trained neurosurgeons, this still is not the condition found in many other countries, though it is obvious that even in those places there is a steady and fast-growing tendency to the development of neurosurgery as a special surgical art. This review, covering the published material over the last several months (and not particularly concerned with case reports), attempts to indicate the general trends in neurosurgery especially outside the United States, but including certain pertinent material from this country.

HEAD

The preoperative localization of tumors by mechanical means has been of general interest for several years, and recently Soille, in a study of 43 patients with verified intracranial tumors located behind the postcentral gyrus, noted that arteriograms showed on side view a spreading of the terminal branches of the sylvian artery, increased tortuosity, and an elevation of its initial part. The anterior curl of the sylvian artery was pushed downward, but the syphon was never stretched, and usually was flattened. On anteroposterior view the most striking sign was a lowering of the first part of the artery, while the middle portion of the anterior cerebral artery was pushed toward the unaffected hemisphere. The exact type of tumor and its particular location in the posterior half of the hemisphere produced varying percentages of these changes. Another report is an analysis of the electroencephalograms of 100 patients with unilateral supratentorial tumors, studied from waking to sleep states, compared to the operative findings. Tumors causing a persistence of the slow-wave focus into sleep with suppression of sleep potentials were the most superficial with respect to convexity of the brain. Tumors causing only a persistence of the slow-wave focus were likewise superficial, but deeper than the former. Tumors causing a disappearance of the delta focus and a relative lack of distortion of sleep patterns were the deepest and were more than 3 cm. from the convexity of the brain.

After a study of 250 histologically verified brain tumors, Götte and Kubicki felt that the degree of malignancy could be prognosticated by a comparison of angiograms, pneumoencephalograms, and electroencephalographic records. Gross dislocations seen in angiograms and pneumoencephalograms with minor electroencephalographic changes indicated a benign tumor in 93 per cent of the patients. Minor dislocations in the radiographs with minor electroencephalographic changes indicated a benign lesion in 89 per cent of the patients. Minor dislocations in the...
radiographs with major electroencephalographic changes were found to indicate malignancy in 87 per cent of the cases. Gross dislocations with major electroencephalographic changes showed a malignancy rate of 72 per cent.

There is much current interest in European literature, particularly the French, having to do with the diagnostic difficulties of posterior fossa, particularly angle, tumors, with much emphasis on the reliability of the mechanical methods of diagnosis (especially air studies). Spillane et al. have stressed the variety of actual anatomical changes to be found in the region of the foramen magnum, as revealed by surgical exposure, in contrast to what may have been revealed by preoperative radiographic studies. This paper, particularly well illustrated and with an excellent bibliography, is a good review of the clinical, radiologic, and operative characteristics of a region known for trickiness. Nachtwey insists that if there is any reason to believe that suboccipital or upper cervical pathology of any sort exists, clinically or radiologically, then suboccipital puncture or needling of any sort must never be done. Abnormal vascularity and displacement of vessels, the brain stem, and upper cord are possibilities that make such puncture dangerous.

Interest continues in certain tumor groups, notably the benign ones, and particularly the meningiomas, epidermoids, chordomas, and certain tumors of childhood, and in those conditions having to do with optic atrophy per se and with unilateral exophthalmos. Tumors of the hypophysis are discussed widely, ranging from methods of technique for removal, such as the subfrontal, extradural, extracapsular removal advocated by Freshwater et al., to the transphenoidal operation so persistently, and be it admitted impressively, urged by Hirsch in his review of 413 patients so operated upon, in conjunction with the use of radium implants. Horrax was a strong advocate of the method of treating such tumors by deep radiation, and he believed that with modern improved apparatus and technique operations upon the hypophysis, with its attendant dangers, can often be avoided and the over-all results of treatment improved. Londofio reported some very interesting results of his electroencephalographic studies of 22 patients with pituitary adenoma and 5 with craniopharyngioma. He showed the changes in electrocortical rhythms to be of three types: generalized disorder with but little modification of frequency; the appearance of theta or delta rhythms; and the appearance of fast rhythms. He believed that these changes are caused by the effect of the tumor on the hypothalamus, and that this involvement activates the cerebral cortex through the anterior and dorsomedial thalamic nuclei and the reticular substance of the brain stem.

Wertheimer and Corradi reported a group of 18 patients with craniopharyngioma (12 men, 6 women) averaging 49 years of age, but ranging from 40 to over 70 years of age. They pointed out that whereas the radiographic and histologic appearances of the tumor present nothing unusual, the clinical signs are different in the older age group from those in children. In the younger patient the main clinical sign may be greatly increased intracranial pressure; in the older patient this is less often true, but instead one finds signs of meningeal irritation, decreasing vision, somnolence, weakness, loss of libido, and amenorrhea. They feel that complete removal of the tumor is desirable but rarely possible, and that in the older patient radical surgery so often leads to death that the surgeon may have to content himself with only drainage of the cyst. Two of their patients were found to have craniopharyngiomas that had undergone transformation into an epithelial type of meningioma, and they believe that pre-operative differential diagnosis must consider