TUMORS OF THE SEPTUM PELLUCIDUM

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TUMORS of the septum pellucidum are so rarely recognized clinically that it is possible to find published descriptions of only 31 cases. Moreover, most of these reported tumors were encountered at autopsy and in only 4 instances was successful removal by operation described. For this reason, the material of a series of 5 such cases was reviewed. Four of the patients were studied at the Illinois Neuropsychiatric Institute, University of Illinois, and 1 at the University of Chicago Clinics.

A review of these case reports indicates that the preoperative diagnosis of tumors of the septum pellucidum is often quite difficult but may be established if the possibility of such a condition is entertained. The importance of establishing the correct diagnosis is emphasized by the fact that 2 of the patients in this series were successfully operated upon and 1 has survived 11 years in excellent health.

CLINICAL DATA


History. The patient was a 37-year-old man who had been in excellent health until 7 years before admission. At that time, he noted the onset of periodic headache, particularly in the vertex; these episodes occurred almost daily and usually began in the early evening. The headaches lasted a few hours and were associated with subjective dimness of vision, impaired hearing and a sensation of pounding in the ears. For about 2 months prior to admission, they were further associated with numbness and weakness in the right leg. The past history included episodes of upper abdominal pain 2 hours after eating relieved by ingestion of food, and a minor head injury at the age of 7. One of 10 siblings was said to have had epilepsy.

Physical Examination. Pulse 88, temperature 99.2, respiration 22, and blood pressure 126/76. General physical findings were not abnormal. On neurological examination, the patient was found to be intelligent, cooperative, well oriented and well adjusted. There was some blurring of the nasal portion of the optic nerve head but no measurable papilledema. Visual acuity and fields were normal. Reflexes were normal and no other abnormalities were noted.

Laboratory Findings. Blood and urine examinations and Wassermann and Kahn reactions were negative. Spinal fluid examination was negative except for a pressure of 195 mm. of water. The EEG showed temporoparietal asymmetry. Radiographs of the skull showed a 4 cm. irregular calcified area in the midline well above the sella turcica. On ventriculography, this mass was seen to be situated between the bodies of the dilated lateral ventricles separating the anterior horns (Fig. 1). A partial ventricular obstruction existed. Angiograms showed abnormal displacement of the anterior cerebral arteries but there was no increase in vascular supply to the calcified mass.

Operation. The tumor was exposed through a right frontal transventricular approach by

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Dr. Eric Oldberg. It was a bluish-red, hard, encapsulated mass extending into the right lateral ventricle, to the floor of which it appeared to be attached. Complete piecemeal resection was accomplished after numerous vessels coursing into it were secured. During the resection, the major portion of the septum pellucidum was removed, thereby making a direct communication between the lateral ventricles.

**Postoperative Course.** The patient was somnolent, hypertonic, and incontinent although his general condition was quite satisfactory. There was slight elevation of temperature for 4 days, but thereafter pulse, temperature, blood pressure and respirations were normal. Two weeks after operation he was found to have papilledema of 1 D., slight right central facial weakness, and increased tonus of the extremities and neck, but reflexes, sensation, and motor power were normal. He was still somewhat confused and his memory was poor, but he responded slowly and rationally to questioning. At the time of his discharge from the hospital, he occasionally urinated involuntarily but was regaining control and improving in general quite rapidly.

**Microscopic Examination of Tissue Removed at Operation.** The tumor (Fig. 2a) was composed of small collections of cells separated or surrounded by large areas of acellular, fibrillary material. The cells contained round to oval nuclei of equal size, which were fairly heavily chromatinized and showed single, large nucleoli. The cytoplasm was scant and frequently not visible. A fairly prominent vascular stroma was present. There was some tendency for the cells to form rings around open areas. In other places, cells were almost completely lacking, being replaced by the fibrillary intercellular substance and by numerous calcareous deposits. Reticulin formation was limited to the rather prominent vascular stroma. The intercellular substance stained blue with phosphotungstic acid hematoxylin in the manner of neuroglial fibrillae.

**Diagnosis.** Subependymal astrocytoma of the septum pellucidum.

**Case 2.** F. O'T. University of Chicago Clinics. First admission June 17, 1936—July 20, 1936.

**History.** The patient was a 51-year-old policeman who had been well, except for a poorly defined recent loss of memory, until 4 months before admission. At that time, he began to complain of headache, dizziness, and a sense of unsteadiness while walking. Two months before admission, he was studied in another hospital following an episode of unconsciousness;