

## Paraventricular "Pseudotumor"

### A Case Report<sup>1</sup>

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Pneumoencephalography revealed an apparent mass adjacent to the base of the septum pellucidum in a 43-year-old man with a history of a recent grand mal seizure. On a repeat pneumoencephalogram subarachnoid air penetrated this area and outlined a circular filling defect. A left anterior cerebral artery loop was responsible for the indentation.

**INDEX TERMS:** Brain neoplasms, diagnosis • Cerebral blood vessels

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**T**HE USE of tomography during pneumoencephalography has improved the informational yield of this examination. Small anatomical features may be visible on tomographic studies which are not apparent even in retrospect on plain radiographs. The following case report is such an example.

#### CASE REPORT

G. E., a 43-year-old man, was admitted 5 days after having his first grand mal seizure. Brief episodes of a bitter taste in his mouth had been followed by a numb sensation over his whole body. Physical examination was normal. An elec-

troencephalogram revealed a strong, abnormal left anterior temporal lobe focus, while the brain scan was normal. A diagnosis of temporal lobe epilepsy was made.

A pneumoencephalogram showed no abnormality until anteroposterior polytomography studies were done to further evaluate the temporal horns. The temporal horns were considered normal, but a prominent indentation along the base of the septum pellucidum in the left frontal horn was discovered (Fig. 1). The left carotid arteriogram was normal.

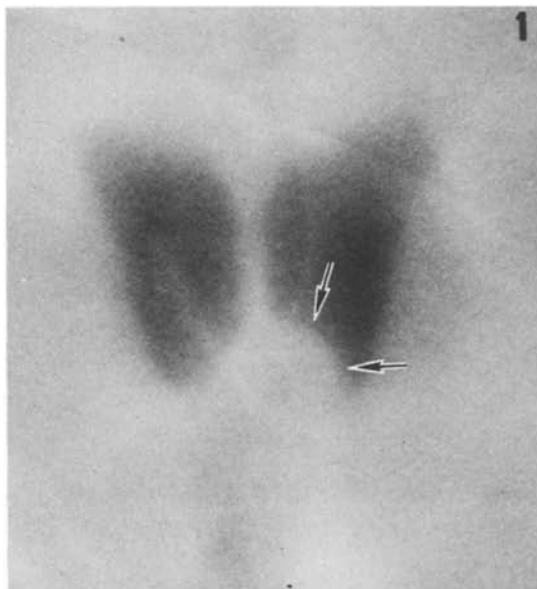


Fig. 1. Thin tomographic section through the anterior horns of the lateral ventricles in brow-up position shows a prominent indentation along the base of the left frontal horn medially (arrows).

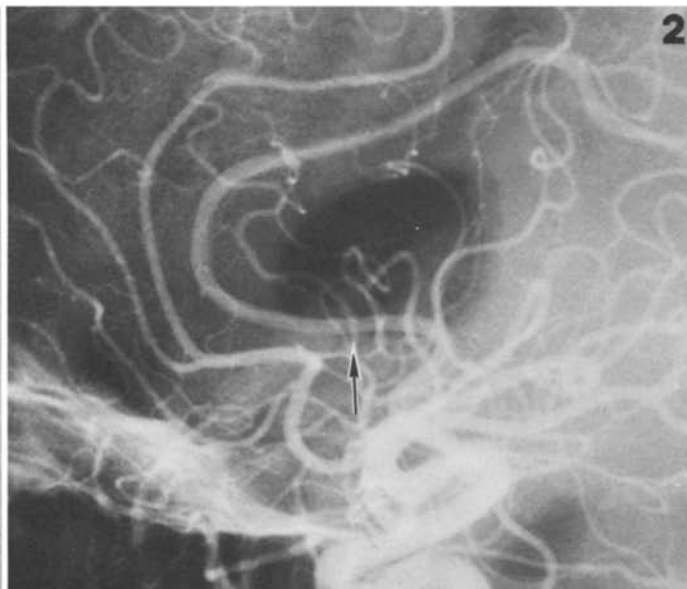


Fig. 2. A major trunk of the anterior cerebral artery courses along the medial aspect of the left frontal horn through the area of the ventricular indentation (arrow).

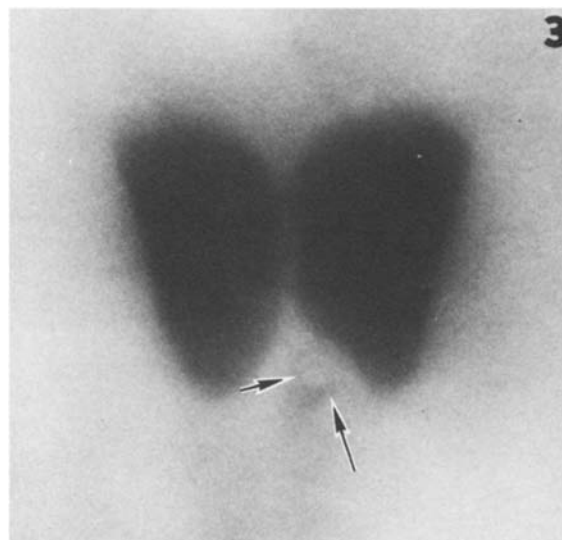


Fig. 3. Second pneumoencephalographic study. Indentation is again seen with air extending into it from the extraventricular aspect. A circular cross section of the anterior cerebral artery can be seen within the indentation.

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It was noted that the anterior cerebral artery ascended abruptly and then coursed for a considerable distance along the medial aspect of the frontal horn (Fig. 2).

The patient was discharged on anticonvulsant medication, and returned two months later for a repeat pneumoencephalogram. The indentation in the left frontal horn medially was again apparent, but on this occasion some air ascended in the interhemispheric fissure to this area of suspicion (Fig. 3). A smooth, round filling defect was visualized, conforming to the most prominent portion of the ventricular indentation, representing a cross section of the left anterior cerebral artery. The possibility of a mass lesion at this location was ruled out.

The patient was clinically reevaluated several months later and had no further symptoms while remaining on anticonvulsant medication.

#### DISCUSSION

A number of mass lesions which can occur in the frontal horn of the lateral ventricle were considered after the first pneumoencephalogram, including ependymomas of several histologic types, glioma of the fornix or septum pellucidum, and lesions of tuberous sclerosis (1-5). Subependymal heterotopic cortical gray matter can produce paraventricular masses in the frontal horns, but these patients exhibit severe psychomotor retardation due to severe structural abnormalities of the brain (6). Other exotic diagnoses such as a parasitic cyst also seemed untenable in view of this patient's generally good health.

A search of the literature failed to reveal a similar case of the anterior cerebral artery indenting the frontal horn and producing a mass effect on pneumoencephalography. This case is therefore presented to illustrate another possible cause for a mass at the base of the septum pellucidum. It is recommended that special effort be made to maneuver subarachnoid air to the region of the "mass" to determine whether or not it is a solid structure.

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