Case Reports and Technical Note

Giant Aneurysm of the Posterior Cerebral Artery*

Case Report

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It is well known that some intracranial aneurysms, having attained a large size without rupturing, may act as space-occupying lesions. Dandy, in his review of large aneurysms of the posterior cerebral artery reported at autopsy, concluded that "the aneurysms of the posterior cerebral artery are usually quite large, and are indistinguishable from neoplasms in the same region." He believed that they could have been clipped and removed after occipital lobectomy, and he quoted one case successfully treated by German in 1938.

We are reporting an enormous unruptured aneurysm of the posterior cerebral artery.

Case History

E. P. A., a 20-year-old girl, was admitted because of failing vision for 1 year and ab-

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normal sensations of smell for 2 years. There had been no headaches.

Examination. The patient was practically blind, with bilateral secondary optic atrophy. Vision was reduced to distinguishing light and the movement of large objects. No other obvious findings were disclosed by the neurological examination, except for a slight loss of postural tone in the left arm, with a doubtful disturbance in the movements of the same arm. All routine laboratory studies were normal. The electroencephalogram showed delta waves in the posterior part of the right hemisphere.

Angiography. The sella was enlarged and showed erosion of the dorsum and posterior clinoids due to increased intracranial pressure. Left carotid angiography showed only a stretching of the vessels, indicating a moderate degree of ventricular dilatation. Right carotid angiography demonstrated the large vascular mass of a giant aneurysm with an irregular sac (about 5×8 cm) located in the

Fig. 1. Giant aneurysm of the posterior cerebral artery visualized by right lateral and anteroposterior carotid angiography.

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temporoparieto-occipital region. In the lower part of the sac another irregular dilatation extended towards the midline and was surrounded by blood vessels (Fig. 1). The filling of the aneurysm was not uniform during the first exposures, but later it was complete and persisted after the filling of the vascular tree had practically disappeared, indicating a slower circulation through the sac of the aneurysm. The main vascular supply to the large sac came from the posterior cerebral artery, which was enlarged and arose directly from the carotid through a dilated posterior-communicating artery that was practically the same size as the internal carotid. The venous drainage of this enormous vascular lesion was through the deep venous system to the veins of Galen and sinus rectus. Left vertebral angiography by direct percutaneous puncture showed the same image and filling of the aneurysm through a large posterior-cerebral artery (Fig. 2).

Iodoventriculography, using emulsifie

Fig. 2. Left vertebral angiography demonstrating the filling of the aneurysm.

Fig. 3. Marked displacement of the ventricular system by the giant aneurysm is shown by iodoventriculography. The filling defect in the posterior part of the third ventricle is shown at the left.