

Anosmia in a Giant Anterior Communicating Artery Aneurysm

REPORT OF A CASE

A 75-year-old man was admitted because of a sudden onset of a right lateral homonymous hemianopia. He had an 11-year history of a slowly worsening hyposmia. The results of serial otorhinological evaluations had always been normal, and there was no history of skull trauma.

On admission, the patient's neurological examination showed a right lateral superior homonymous quadrantanopia and confirmed a bilateral anosmia (olfactometry). Two days later, a computed tomographic scan (**Figure 1**) revealed an ischemic lesion in the left inferior calcarine region and showed a big frontal interhemispheric hyperdense mass measuring 45 × 35 × 45 mm, with an anteroposterior largest diameter. The lesion was peripherally calcificated and provoked an important straddle of ventricular frontal horns, posteriorly pressing against the terminal plate, anterosuperiorly touching the falx cerebri, and inferiorly leaning against the cribriform plate of the ethmoid bone. Cerebral magnetic resonance imaging (**Figure 2**) followed by magnetic resonance angiography (**Figure 3**) disclosed a completely

patent giant saccular aneurysm of the anterior communicating artery (ACA) and clearly showed the close relationship with the ethmoid plate and the third ventricle and a dislocation of corpus callosum. Cerebral angiography and partial resection of the aneurysm were suggested to the patient, but he refused both. After 8 months, the results of his clinical examination and cerebral magnetic imaging were unchanged.

COMMENT

The prevalence rate of cerebral aneurysm is 0.5%; the risk of a rupture is approximately 2% per year but is dependent on size. According to the Weir classification,¹ an aneurysm is considered "giant" when its largest diameter is greater than 25 mm; only in rare cases can sizes larger than 35 mm be observed. Thirty-eight percent of the cerebral aneurysms are in the ACA, and approximately 90% of them are asymptomatic and must be classified in first grade of the Hunt-Hess scale.²

When unruptured aneurysms of the ACA are not silent, the most frequently observed symptoms are visual and endocrine disorders, head-

ache, dementia, and emotion lability. The case reported herein is therefore uncommon in that the only apparent sign was worsening hyposmia; according to our knowledge, only 1 case of monolateral anosmia has been reported in the literature, and that case was associated with blindness and diencephalic seizures.³

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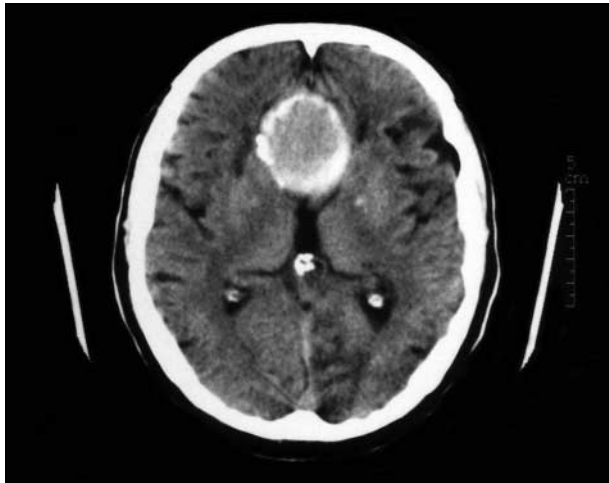


Figure 1. A computed tomographic scan of the brain shows a left occipital ischemic lesion and a large hyperdense frontal mass.

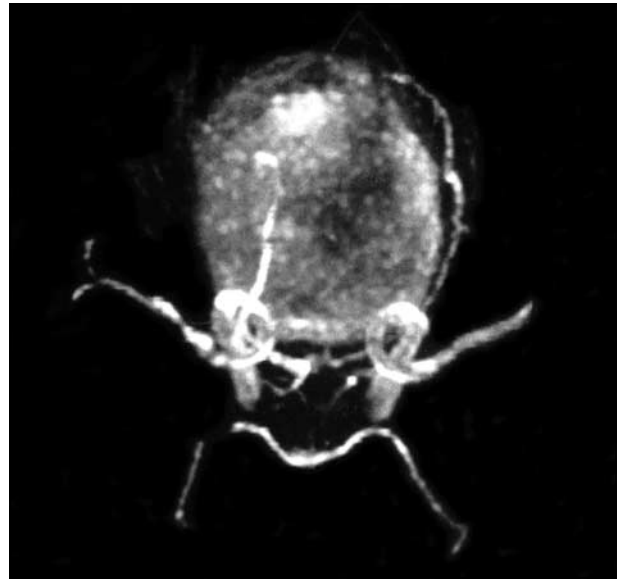


Figure 3. A magnetic resonance angiogram shows the aneurysm's origin from the anterior communicating artery.

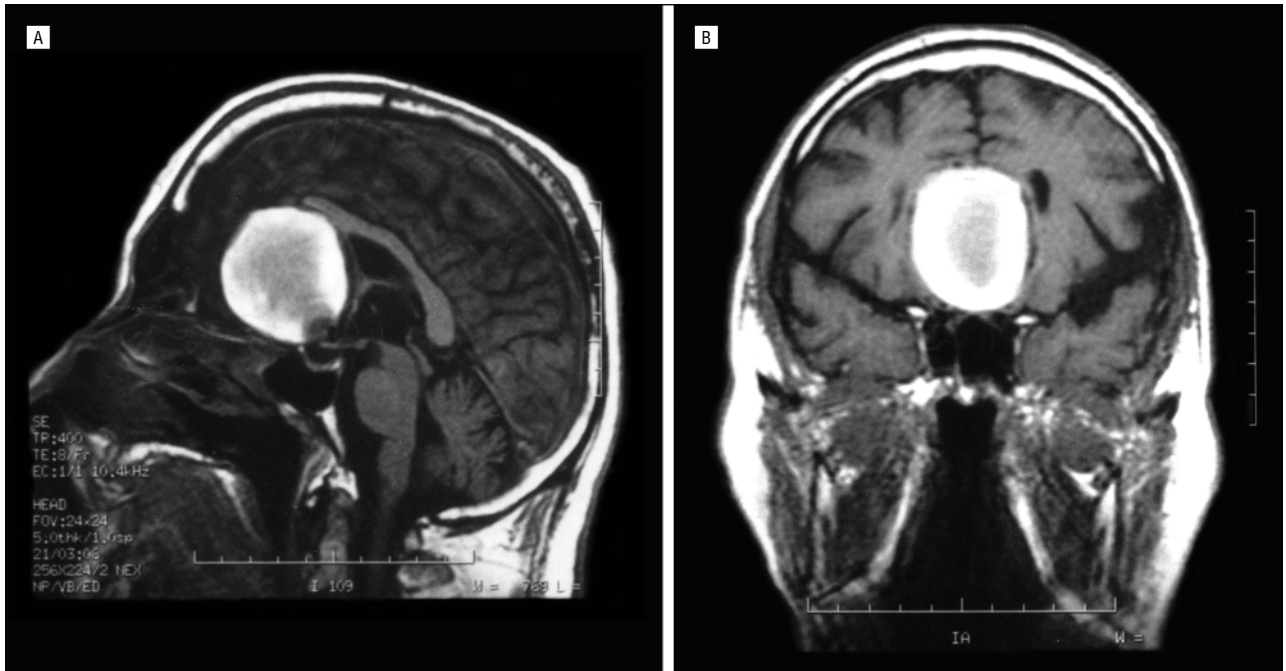


Figure 2. Sagittal (A) and coronal (B) sections of the brain on magnetic resonance images demonstrate a giant saccular aneurysm and its relationship to the cribriform plate.