Spontaneous, isolated, mesencephalic hemorrhage

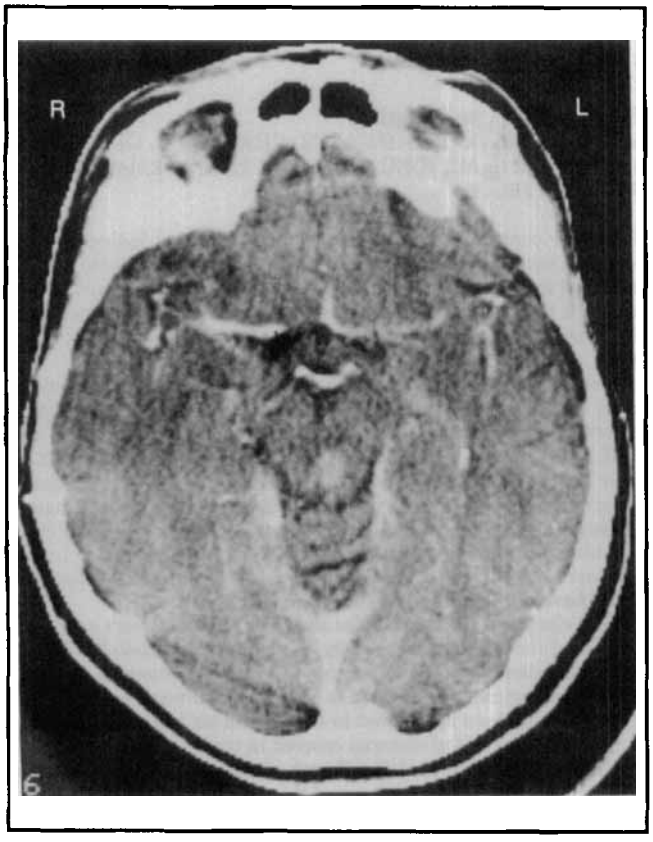
To the Editor: Sand et al[1] and Weisberg[2] bring attention to an allegedly uncommon condition, spontaneous nonhypertensive mesencephalic hemorrhage (SMH). We have encountered an unusual case that adds to the clinical spectrum of SMH.

A 67-year-old, nonhypertensive woman awoke from a daytime nap to note bilateral ptosis and double vision, particularly on looking down and to the left. On the following days, she noted retro-orbital "pressure" and generalized fatigue. An ophthalmologist gave edrophonium without effect. Subsequent neurologic evaluation revealed normal mental status, bilateral partial ptosis, left inferior rectus weakness, and pupils 4 mm in size and equally reactive to light. The remainder of the examination was normal. CT revealed a nonenhancing high-density area in the left mesencephalic tectum (figure). One week later, CT demonstrated slight enlargement of the third and lateral ventricles, with mild edema adjacent to the hematoma. The patient realized gradual, complete recovery over 2 months. MRI 5 months after the ictus was normal.

This case is remarkable in two respects: the relatively isolated neuro-ophthalmologic features at onset and the full recovery.

Ocular findings of the dorsal midbrain syndrome of Parinaud are commonly described in SMH, but our patient had what appeared to be a partial oculomotor nuclear lesion. Selective involvement of the third nerve nucleus, although rare, can be explained by the proposed organization of the oculomotor nuclear complex into distinct motor cell pools subserving individual extraocular muscles.[3] Injury to the caudal midline cell group controlling both levators and the adjacent inferior rectus subnucleus could have been responsible for the findings.

The limited extent of the clinical signs was surprising in view of the ominous CT. SMH has been attributed to rupture of small vascular malformations. Clinical signs could be produced by some combination of compression or destruction of neighboring structures. If it is mainly compressive, as we presume in our case, excellent recovery might be expected when the hematoma is resorbed.



Lawrence Z. Stern, MD
Charles Bernick, MD
Tucson, AZ

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2. Weisberg LA. Mesencephalic hemorrhages: clinical and computed tomographic correlations. Neurology 1986;36:713-6.
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Reply from the Authors: Drs. Stern and Bernick's comment and observation on spontaneous, isolated, mesencephalic hemorrhage is appreciated. Their case demonstrated nuclear third nerve disorder after an isolated rostral mesencephalic hemorrhage, presumably due to a ruptured cryptic vascular malformation. We believe, however, that the hemorrhage was localized to the dorsal midbrain tegmentum, slightly lateralized leftward, and with extension to the tectum. Although CT remains the primary tool for the diagnosis of intracranial hemorrhages, MRI is quite useful in delineating the extent and anatomic relationships of the hematoma. As current MRI techniques allow location of major nuclei and tracts of the brainstem,[1] a better correlation of isolated oculomotor nuclear complex lesions with the clinical manifestations observed in patients is to be expected.

The observation by Stern and Bernick and the recent article by Weisberg[2] reinforce the impression that mesencephalic hemorrhages may occur in an isolated form and are compatible with relatively good functional recovery.

John J. Sand, MD
José Biller, MD
James J. Corbett, MD
Harold P. Adams, MD
Val Dunn, MD
Iowa City, IA

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Correction

A misstatement appeared in the letter, "Gelastic seizures, precocious puberty, and hypothalamic hamartoma," published in the March 1986 issue of *Neurology*. The first paragraph of the author's reply should read:

"Decisions about surgical therapy for patients with precocity and hamartoma depend, in part, upon the response of the patients to medical therapy and morphology of the hamartoma. Resection of hypothalamic hamartomas is usually difficult or impossible; even when authors report successful surgical therapy of precocity, they recommend medical management for most cases. Therapy with luteinizing hormone-releasing hormone analogue has effectively treated boys with precocity due to hamartoma. Management of precocity with cyproterone acetate has also been successful."

Gelastic seizures, precocious puberty, and hypothalamic hamartoma

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