

Gelastic attack in a child with moyamoya disease

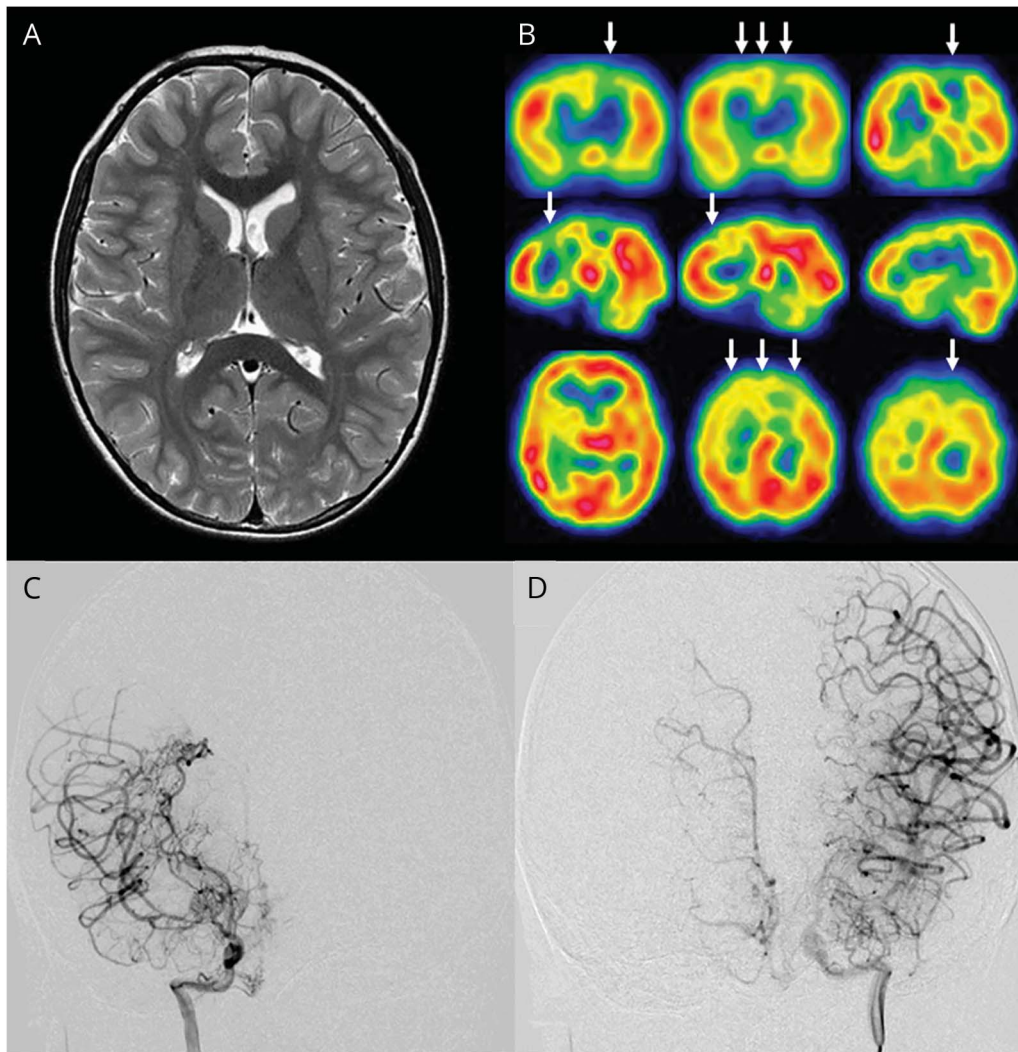
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Figure 1 Preoperative radiologic findings



(A) T2-weighted axial MRI shows no lesions. (B) Interictal ^{123}I -IMP SPECT shows decreased cerebral blood flow in multiple areas including the frontal lobe and cingulate gyrus; arrows show the areas of decreased uptake. (C) Right internal carotid angiography and (D) left internal carotid angiography show stenocclusive changes at the terminal portion of the bilateral internal carotid artery and moyamoya vessels.

A 7-year-old girl presented with paroxysms of transient laughter accompanied by right limb weakness, followed by crying. She was diagnosed with moyamoya disease (figure 1). Interictal ^{123}I -IMP-SPECT showed decreased cerebral blood flow in multiple areas including the frontal lobe

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▶ Video

*These authors contributed equally to this work.

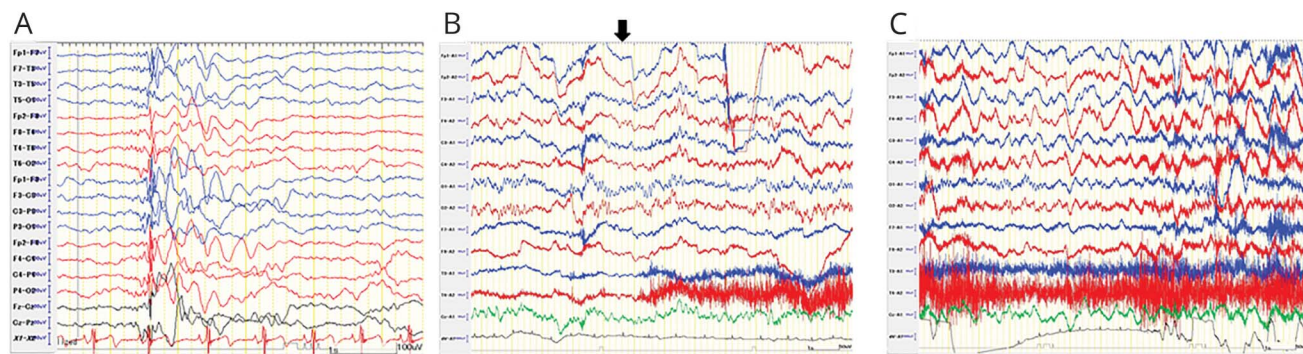
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Figure 2 Interictal and ictal EEG



(A) Interictal EEG shows generalized spike-and-slow-wave complexes at a frequency of once per hour. (B, C) Ictal EEG during an attack induced by hyperventilation. (B) Arrow shows the onset of a gelastic attack associated with a prominent muscle artifact, then generalized slowing was recognized 10 minutes later (C). No epileptiform discharge was observed.

and cingulate gyrus (figure 1). All the paroxysms of laughter occurred without unconsciousness and appeared only after hyperventilation during crying (video). EEG revealed no epileptiform discharge in the ictal state (figure 2). After bilateral revascularization, the paroxysms did not reappear. These attacks had behavioral features consistent with ischemia or epilepsy, the former being more likely.^{1,2}

Author contributions

Hime Suzuki: acquisition of data, analysis and interpretation of data, writing. Takeshi Mikami: acquisition of data, analysis and interpretation of data, supervision. Rei Enatsu: analysis of data. Aya Kanno: acquisition and analysis of data.

Yasuhiro Takahashi: acquisition of data. Nobuhiro Mikuni: supervision.

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Disclosure

The authors report no disclosures relevant to the manuscript. Go to Neurology.org/N for full disclosures.

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