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A child who presented with cerebral infarction: Clipping combined with bypass surgery of a thrombosed giant aneurysm

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Purpose:
Cerebral aneurysms are not common among children and most of them are presented with subarachnoid hemorrhage or mass effect. Here, we describe a rare case of a pediatric giant aneurysm presented with cerebral infarction.

Methods:
A 38-month-old boy visited the emergency room due to left hemiparesis and left central type facial palsy. Initial magnetic resonance imaging showed acute cerebral infarction on the right basal ganglia and coronal radiata. Furthermore, a thrombosed aneurysm with a diameter of 30.57 mm at the frontal branch of the right middle cerebral artery was observed.

Results:
A right pterional craniotomy with Sylvian dissection was performed. Superior and inferior divisions of the frontal branch originating from the aneurysm were identified. The superior division was cutoff from an aneurysm and clipping saving the inferior division was done. Subsequently, end-to-end anastomosis was done between a parietal branch of the superficial temporal artery and a superior division from the aneurysm. No acute complication from the operation was observed. Motor power of the left upper extremity recovered after rehabilitation, while fine motor impairment remained 6 months after the surgery.

Conclusions:

This case illustrates successful treatment of a pediatric giant aneurysm with extremely rare presentation of cerebral infarction, under a meticulous surgical plan and ad hoc modification.