Headache Medicine

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Migraine and cerebrovascular vulnerability in young adults from the Amazon: case reports of carotid artery dissection and reversible cerebral vasoconstriction syndrome

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Introduction
Migraine has increasingly been recognized as a potential marker of cerebrovascular vulnerability and has been associated with a higher risk of ischemic events in young individuals. Conditions such as cervical artery dissection and reversible cerebral vasoconstriction syndrome (RCVS) often initially present with headache, mimicking primary headache disorders and delaying etiological diagnosis

Case presentation
We report two cases of young patients admitted to a specialized stroke unit in Roraima presenting with acute neurological deficits preceded by headache. The first case involved a 30-year-old woman with a history of migraine who developed an ischemic stroke in the right middle cerebral artery territory secondary to right internal carotid artery dissection. She presented with a headache distinct from her usual pattern followed by sudden left hemiparesis. Vascular imaging confirmed extracranial carotid dissection. The second case involved a 27-year-old man presenting with sudden severe thunderclap headache followed by seizure and left-sided hemiparesis. Neurovascular imaging demonstrated multifocal arterial vasoconstriction compatible with RCVS. Both patients received specialized treatment and showed favorable clinical outcomes.

Discussion
These cases highlight the importance of investigating secondary causes of headache in young patients, particularly when focal deficits, seizures, or changes in headache pattern are present. Cervical artery dissection is an important cause of ischemic stroke in young adults, whereas RCVS is characterized by reversible segmental vasoconstriction associated with thunderclap headache and neurological complications. Early recognition requires a high index of clinical suspicion and prompt vascular neuroimaging.

Conclusion
Comprehensive etiological evaluation and early vascular imaging are essential to distinguish arterial cerebrovascular syndromes from reversible vascular disorders, enabling prompt treatment and reducing the risk of severe neurological sequelae.

Keywords:
Migraine
Stroke
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Young adult

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