

An unusual case of stroke in young adult after motor vehicle accident without evidence of dissection

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Isolated midbrain infarctions in young adults are rare and poorly studied. Blunt cerebrovascular injuries with cerebrovascular dissection have been identified as a cause of stroke after trauma in young adults. Little is known about the etiology of stroke following blunt cerebrovascular injury when dissection is not discovered. We report an isolated stroke in the posterior midbrain of a young woman following motor vehicle accident with unclear etiology. A 28 year-old previously healthy female presented to the hospital after low-speed motor vehicle accident. She was evaluated and released. She returned to hospital hours later with acute onset the decreased visual acuity in right eye with dilated pupil and painless paresthesias on the right half of her tongue. On physical exam, associated decreased superior and inferior gaze, and decreased adduction were noted. CTA of the neck and repeat CT head were unremarkable. MRI/MRA of the brain was significant for subacute right posterior midbrain infarct and axonal injury with intact anterior and posterior circulation. Extensive blood work up did not reveal any abnormalities. Midbrain cerebrovascular accidents in young patients in the absence of dissection are rare. There is a correlation between blunt head trauma leading to dissection, which can cause stroke. In the presented case, there was no evidence of dissection following blunt trauma. Identification of cerebrovascular dissection following blunt head trauma is important as anti-coagulation has been shown to be beneficial in this setting. Cerebral infarction in the setting of blunt trauma may not always be due to vessel dissection.