

Head injury, varicella vasculopathy: Differential diagnosis for pediatric retinal arterial occlusion

Dear Sir,

We read the article titled, "Idiopathic pediatric retinal artery occlusion" by Manayath *et al.*^[1] We appreciate the authors effort. Authors have mentioned about absence of etiology in spite of extensive workup. We would like to highlight few points regarding asymptomatic oral trauma induced internal carotid artery spasm which may present as ischemic attack in anterior or middle cerebral artery territory.

Apart from posttraumatic cranial arterial spasm other conditions such as varicella vasculopathy (VV), chronic tonsillitis, cervical adenitis, and retropharyngeal abscess may cause childhood stroke.^[2] Unilateral and bilateral occlusions of cervical internal carotid arteries may develop.

Stroke following intraoral trauma is rare. A high index of suspicion helps to identify this peculiar form of stroke in childhood. Penetrating or blunt trauma to pharynx may cause internal carotid artery occlusion. In mild injury, it may cause arterial spasm. Clinical manifestations may involve either anterior or middle cerebral artery region with overlapping or partial features depending on degree of occlusion and the competence of circle of Willis.^[3]

Varicella vasculopathy is a differential diagnosis in pediatric stroke.^[4] Initial infection with varicella-zoster virus results in chickenpox typically seen in patients 1–9 years of age. Central nervous system complications include self-limiting cerebellar ataxia, meningitis, meningoencephalitis, and vasculopathy. Stroke may occur months after chicken pox secondary to VV and is not always easy to diagnose. Stroke, transient ischemic attacks, mental status changes, fever, and headache are clinical features of VV. In VV, ischemic optic neuropathy can occur with normal cerebral angiogram and magnetic resonance imaging. Since VV can occur without rashes, all vasculopathies of unknown etiology should be evaluated for VV. Rapid diagnosis of VV is important since the mortality rate without treatment is 25%. Treatment with intravenous acyclovir, even after neurological disease has been present for months may be curative.

VV presents as acute hemiparesis, aphasia, hemianesthesia, focal neurological or retinal deficits^[5] associated with mononuclear pleocytosis, and virus-specific antibodies in cerebrospinal fluid. Varicella-associated arterial ischemic stroke accounts for one-third of childhood ischemic stroke.

To conclude, proper history taking and meticulous clinical examination (multidisciplinary approach) supplemented by

appropriate investigations are essential in pediatric retinal artery occlusion (branch and central).

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

Natarajapillai Venugopal

Department of Neuro-ophthalmology, Clinic and Glaucoma Service, AG Eye Hospital, Trichy, Tamil Nadu, India

Correspondence to: Dr. Natarajapillai Venugopal, No. 19, Mathuram Apartments (Behind YMCA), Officer's Colony, Puthur, Trichy - 620 017, Tamil Nadu, India. E-mail: natavenu@yahoo.com

References

1. Manayath GJ, Shah PK, Narendran V, Morris RJ. Idiopathic pediatric retinal artery occlusion. *Indian J Ophthalmol* 2010;58:151-2.
2. Kaul S. Cerebrovascular disease in children. *Indian Pediatr* 2000;37:159-71.
3. Singhi P, Khandelwal NK, Mahajan V, Shahab S, Gupta V. Stroke following a bicycle injury. *Indian J Pediatr* 2007;74:856-8.
4. Mueller NH, Gilden DH, Cohrs RJ, Mahalingam R, Nagel MA. Varicella zoster virus infection: Clinical features, molecular pathogenesis of disease, and latency. *Neurol Clin* 2008;26:675-97, viii.
5. Selvakumar CJ, Justin C, Gnanaeswaran R, Chandrasekaran M. Post - varicella vasculopathy. *J Assoc Physicians India* 2010;58:572-3.

This is an open access article distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as the author is credited and the new creations are licensed under the identical terms.

Access this article online

Quick Response Code:	Website:
	www.ijo.in
	DOI: 10.4103/0301-4738.207452

Cite this article as: Venugopal N. Head injury, varicella vasculopathy: Differential diagnosis for pediatric retinal arterial occlusion. *Indian J Ophthalmol* 2017;65:424.