TRANSIENT CEREBRAL ARTERIOPATHY IN YOUNG CHILDHOOD ASSOCIATED WITH CYTOMEGALOVIRUS INFECTION

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Background: Transient cerebral arteriopathy (TCA) is a recently described entity that is increasingly recognized as an important cause of arterial ischaemic stroke in children. Infectious agents associated with TCA include varicella-zoster virus, enterovirus, HIV and Borrelia burgdorferi. We report a patient with cytomegalovirus (CMV)-associated TCA.

Methods: A previously healthy 30-month-old girl presented with acute onset of left hemiplegia. Brain CT, magnetic resonance imaging (MRI) and angiography (MRA) were arranged. A testing for viral infection was performed and included detection of viral material in the cerebrospinal fluid (CSF) using polymerase chain reaction (PCR) techniques and detection of antibodies (IgG and IgM) in early and late sera.

Results: Cranial MRI and MRA showed proximal stenosis of the right medial cerebral artery and ischemic lesions in the territory of this artery. Intriguingly, “puff-of smoke” network of vessels in the right basal ganglion are also depicted on MRA. Analysis of the CSF showed pleocytosis but normal chemistry profiles and negative bacterial culture. Positive CMV IgG and IgM and detection of CMV-DNA in CSF specimens by PCR suggested active CMV infection. Treatment with ganciclovir and anti-CMV immunoglobulin in addition to prednisolone mediation for 4 months resulted in gradual improvement of clinical symptoms. Intriguingly, the subsequent MRA revealed reversible vascular changes in the previously occluded cerebral artery after 6 months.

Conclusions: To our knowledge, this is the first report of a CMV infection associated with TCA in an immunocompetent child. Our report demonstrates the propensity for CMV to be involved in pediatric cerebral vascular disease.