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Bilateral Thalamic Lesions in a Pre-schooler with Parvovirus Infection

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Abstract

The T2 weighted MRI image of a school going child with parvovirus B-19 infection is described here. Parvovirus B19 infection is associated with a variety of neurologic manifestations of which encephalopathy and/or encephalitis are most commonly reported. However, bilateral basal ganglia lesions due to parvovirus B-19 infection have never been previously reported. We chose to report this image to highlight this uncommon association of human parvovirus B-19 infection in man.

Key words: Basal ganglia; Parvovirus B19; B19; Virchow- Robin spaces; Bilateral basal ganglia lesions.

Image details

Bilateral basal ganglia lesions are an uncommon entity with a limited differential diagnosis that includes infection, metabolic disturbances, vascular lesions and neoplasia (1). We report here the case of a pre-schooler who presented to the emergency with features of viral meningoencephalitis and was found to have lesions in the basal ganglia bilaterally suggestive of prominent Virchow-Robin spaces.

A 4 year old female child presented to the emergency with history of a viral prodrome followed by loose stools and vomiting of 10 days duration. At admission, she was comatose, hypotensive and had features of raised intracranial tension. She was managed symptomatically with measures to maintain her cerebral perfusion pressure. Her cerebrospinal fluid was suggestive of aseptic meningitis with lymphocytic predominance and T2 weighted magnetic resonance imaging scan revealed bilateral cerebrospinal fluid hyper-intensities in the basal ganglia suggestive of prominent Virchow-Robin spaces. The cause for bilateral basal ganglia involvement was presumed to be due to parvovirus B19 infection as the real-time polymerase chain reaction was positive for parvovirus B19 antigen in serum. The child survived the acute illness but had sequelae in the form of extrapyramidal movements. Parvovirus B19 infection is associated with a variety of neurologic manifestations of which encephalopathy and/or encephalitis are most commonly reported (2). The outcome of CNS disease is often poor and neurologic sequelae may occur in as many as ¼th of the cases (3).

Small Virchow- robin spaces are a normal occurrence in all age groups. However, these may be enlarged due to perivascular cuffing by mononuclear cells in various infective and inflammatory conditions of CNS (4). We chose to report this image to highlight this uncommon manifestation of human parvovirus B19 infection in man.

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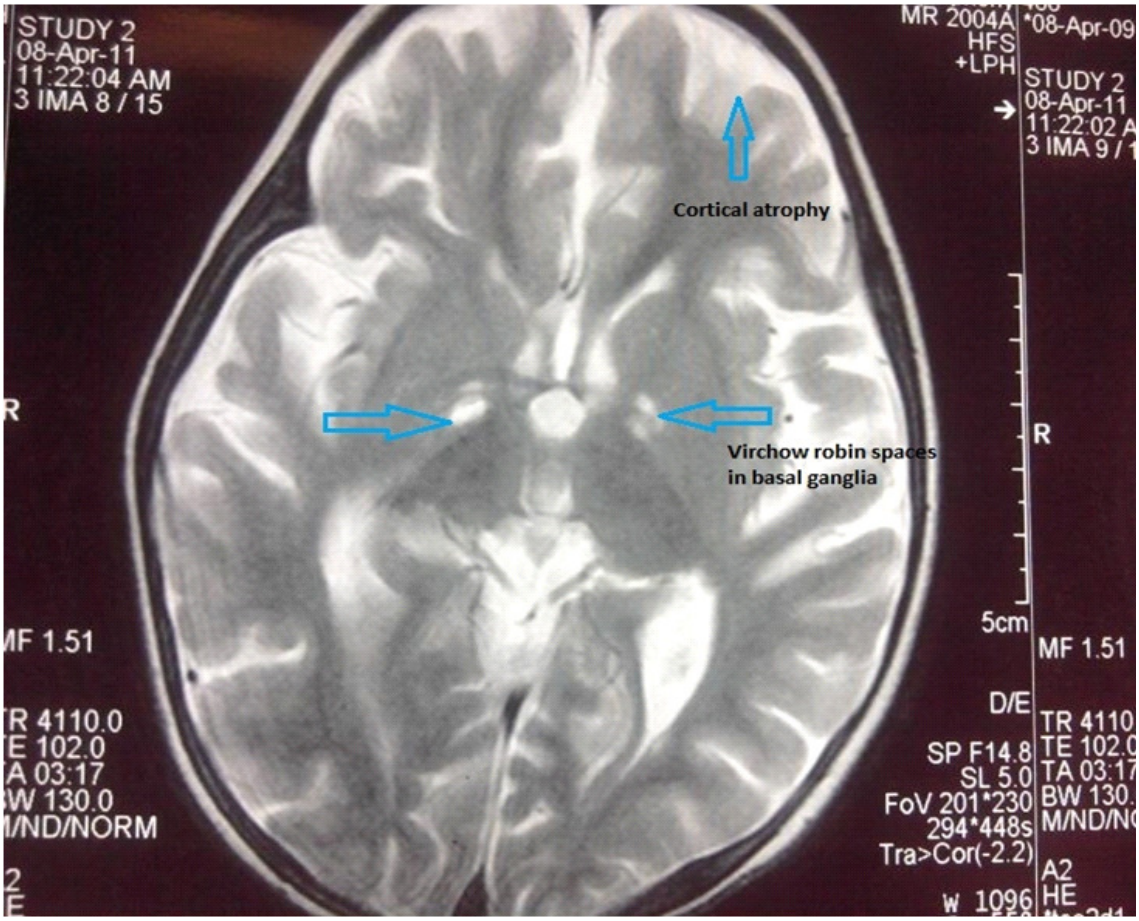
Image 1: T2-weighted MRI image of the child showing small signal intensity bilaterally in the basal ganglia suggestive of prominent Virchow-Robin spaces and mild cortical atrophy



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