

PAPILLEDEMA SECONDARY TO LYME NEUROBORRELIOSIS IN CHILDREN: A CASE REPORT

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Introduction: Lyme neuroborreliosis (LNB) is a manifestation of Lyme disease involving the central and peripheral nervous system. It is caused by the spirochete *Borrelia burgdorferi*, transmitted by tick bites to a human host. Clinical signs of LNB develop after the dissemination of the pathogen to the nervous system. The infection occurs in children often present with facial nerve palsy and/or subacute meningitis but subacute headache can be the only manifestation of LNB in children. Non-specific symptoms, such as loss of appetite, fatigue or mood changes, may also occur, especially in young children. This case presentation provides an overview of the spectrum of clinical manifestations, diagnosis, antibiotic treatment, and clinical outcome of LNB in children.

Purpose: Neuroborreliosis may cause various neuro-ophthalmological complications. Meningitis, intracranial hypertension, and papilledema occur more commonly in children than adults. We describe a case with a bilateral papilledema at a 4-years old child after a tick bite.

Case report: A 4-years-old child complaining of headaches, low-grade fever, loss of appetite and fatigue during 2 weeks after an insect bite. After neurological examination the child was referred to ophthalmological examination and blood test for *Borrelia burgdorferi*. In the serum, raised IgM to *Borrelia burgdorferi* was detected. On fundoscopic exam, he was found to have bilateral optic disc swelling with elevation, blurring, and large vessels crossing elevated margins consistent with papilledema. Visual acuity was 1.0/1.0, and bilaterally pupillary reactions were normal. Magnetic resonance imaging (MRI) showed bilateral papilledema and normal appearance of the brain tissue. He was started on antibiotic ceftriaxone and azithromycin and completed a total of 14 days of therapy. He did not require any additional therapies including steroids. Follow-up appointment with ophthalmoscopy one month after diagnosis revealed improving disc edema.

Conclusions: Isolated papilledema is a rare manifestation of Lyme disease but a high level of suspicion and early recognition of the various clinical manifestations presented by children with LNB is essential to minimize delay in diagnosis and optimize management.