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CMV Mononucleosis Complicated by Meningoencephalitis in a Normal Host

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In children cytomegalovirus (CMV) infection is most frequently asymptomatic. In 1965, this virus was first described as a cause of mononucleosis (MN) like illness(1). In fact, today it is stated to be the second most frequent etiologic agent caus-

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ing mononucleosis after Epstein-Barr virus(2) and responsible for one-half of the heterophil antibody-negative MN syndromes(3). Systemic complications in non-immunocompromized hosts are rare(4). The CNS is seldom involved and neurological complications have been reported only in adults(4). We report a child with CMV infection presenting as mononucleosis complicated by meningoencephalitis.

Case Report

A 10-year-old girl weighing 26 Kg with no previous history of recurrent or major illness presented with fever and generalized lymphadenopathy of 10 days duration. The fever was high grade and remittent. She had sought advice from a general practitioner who had diagnosed pharyngitis and prescribed cephalexin which she had taken for 3 days. On clinical examination she was febrile, had white exudates over tonsils, generalized lymphadenopathy (cervical, axillary and inguinal), and a just palpable liver and spleen. There was no pallor, bleeding tendency, skin rash or bony tenderness. With a

provisional diagnosis of infectious mononucleosis, a complete blood count and Paul-Bunnell test were ordered. Investigations showed a hemoglobin of 11.4 g/dl, TLC of 9,700/cu mm, with DLC of polymorphs 63%, lymphocytes 27%, atypical lymphocytes 9%, and eosinophils 1%. Paul-Bunnell by latex agglutination test and Monospot test were negative. Blood was collected for CMV IgM testing.

At this stage the patient developed headache, vomiting and deteriorated over one day. She had one attack of a generalized seizure lasting 10 minutes. Neurological examination revealed a drowsy child responding to painful stimuli and briefly to calls and commands. She had terminal neck stiffness, normal fundus and extensor plantars. She had no localizing signs. CSF analysis revealed: sugar—77 mg/dl, protein—120 mg/dl; chloride—109 mEq/L; cytology—48 nucleated cells (neutrophils—50% and lymphocytes 50%). Liver function tests and blood sugar were normal. The CMV IgM report showed a value of 1.3 (Normal <0.9 by Elisa method). Urine was negative for CMV inclusions. A diagnosis of CMV mononucleosis complicated by meningoencephalitis was entertained. Symptomatic treatment was given. She recovered over the next 72 h and was discharged on the 8th day without a ny neurological deficit.

Discussion

CMV mononucleosis in childhood is believed to be uncommon(5-8). Cases of encephalitis (or meningoencephalitis) associated with CMV in the non-immunocompromized host in the literature are few. The proposed mechanism of CNS manifestation of CMV infection in non-immunocompromized hosts appears to be direct invasion of CNS. A careful history apart from

specific serologic and isolation procedures may be of help in distinguishing acquired CMV infection from other heterophilic antibodies negative conditions like EB virus, Hepatitis A, *Toxoplasma gondii* and HIV.

Though vidarabine has been tried in treatment of CMV encephalitis, the condition is self limiting and leaves no sequelae. Early suspicion and diagnosis of CMV in a viral illness in which prolonged fever is common avoids the need of numerous diagnostic (and potentially dangerous) tests.

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