Journal of Research in Medical and Dental Science
2021, Volume 9, Issue 10, Page No: 57-58

Available Online at: www.jrmds.in
eISSN No.2347-2367: pISSN No.2347-2545

An Unusual Manifestation of Cytomegalovirus Infection

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ABSTRACT

Acid peptic disease is one of the important treatable causes of abdominal pain. The term encompasses esophagitis, gastritis, peptic ulcer disease and duodenitis. Cytomegalovirus (CMV) is a DNA virus of the herpes virus group and as such, after primary infection, causes latent infection with frequent subclinical reactivations for the life of the host. Risk of reactivation is higher in immunocompromised patients for whom CMV is recognised as an important pathogen. It is ubiquitous in the community, and in the immunocompetent host usually results in asymptomatic infection. Although CMV infection in immunocompetent hosts is generally asymptomatic or presenting as a viral or mononucleosis-like syndrome, gastrointestinal, neurological, haematological, skin, cardiac or ocular CMV disease can also occur, mostly as reactivation. In these cases, it can cause severe organ damage, resulting in significant morbidity and mortality. We present a rare case of an immunocompetent patient with CMV gastritis as manifestation of an acute CMV infection.

Key words: Digital radiograph, Distolingual root, Endodontic treatment, Radix entomolaris, Maxillary first molar.

HOW TO CITE THIS ARTICLE: Sundari S, Jennifer Priscilla V, An Unusual Manifestation of Cytomegalovirus Infection , J Res Med Dent Sci, 2021, 9(10): 57-58

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Received: 09/08/2021
Accepted: 24/09/2021

CASE REPORT

A 14 -year- male old child presented to the emergency department with severe occipital headache, high grade fever, odynophagia for the past 4 days. Baseline investigation done was within normal limits. Neurologist opinion was sought and he underwent a lumbar puncture, which showed no abnormalities. Otorhinolaryngologist diagnosed an acute tonsillitis, discharging him with oral antibiotic and an analgesic. Two days later, he presented with nausea, vomiting, with severe headache, blurred vision, and photophobia. He was admitted and started on intravenous proton pump inhibitors, Paracetamol and he did not respond to the medication. A CT- Angiogram of the cranium was performed, excluding vascular brain malformations. On the 5th day of hospitalisation, he developed fever without focus for which antibiotic was escalated to ceftriaxone. During the following 10 days, the patient remained febrile, with migraine-like headache. No cough, dyspnoea, thoracic pain or gastrointestinal or urinary symptoms were observed. Laboratory investigations revealed mild thrombocytopenia (1,33,000), lymphocytosis (55%) with activated lymphocytes, elevation of aspartate aminotransferase and alanine aminotransferase. HIV and Hepatitis virus were negative. Mantoux test negative. Blood and urine cultures were negative. CMV IgM was positive 2.27 (immunofluorescence assay), CMV culture in blood and urine was negative. CMV viral load was detectable (real-time PCR). Anti-parietal cell antibodies were positive. Abdominal ultrasonography showed homogenous splenomegaly and Endoscopy showed shallow erosions of the gastric antrum, which were biopsied. The histopathological and immunohistochemistry study of the biopsied samples identified cytomegalic inclusions in endothelial cells of the lamina propria, which confirmed gastric CMV disease. The patient was treated with Ganciclovir 5 mg/kg intravenously twice daily with good clinical evolution and resolution of gastric lesions confirmed by endoscopic evaluation.

DISCUSSION

CMV infection in immunocompetent patients is usually asymptomatic. Invasive disease is rare usually caused by reactivation of CMV infection [1-6]. CMV lesions in gastro intestinal tract are isolation of Intranuclear and intracytoplasmic inclusions producing an owl's eye appearance which is typical of CMV.

A clinical diagnosis may be confirmed by:

- Isolation of the virus from urine, peripheral blood mononuclear cells, or other secretions;
- Demonstration of a significant rise in antibody titre during the illness;
- The presence of typical histological lesions in a biopsy specimen,
- Typical inclusion bodies in cell deposits of fresh urine.

The diagnosis of a CMV disease needs together with demonstration of CMV by viral isolation (culture, detection of CMV proteins or CMV DNA amplification),

histopathological and Immunohistochemical analysis or in situ hybridisation of a clinical sample from the site of involvement. CMV serology may help distinguish primary infection (seronegative patients) from CMV reactivation (seropositive patients). CMV is mostly a self-limited disease, antiviral treatment is usually not recommended in immunocompetent CMV infection, except in cases with organ involvement [7]. Menetriers disease is a rare disorder with giant, hypertrophied gastric folds with excessive mucus production and protein losing enteropathy, this could be associated with CMV infection. In children it is considered benign and self-resolving, whereas in adults, it can be premalignant [8]. Our patient was symptomatic in the follow-up consultation with isolation of inclusion bodies from the biopsy specimen we opted for treatment for which the child responded well, with full recovery it may also be due to the self-limiting nature of the disease. Blood products from CMV antibody negative donors should always be given to preterm neonates and immunocompromised patients, particularly post-transplant or HIV infected patients. Alternatively, as the virus is cell associated, filtration or freezing of the donor blood to remove white cells also reduces the risk of acquired CMV infection. Passive immunoprophylaxis of transplant patients with immunoglobulin is partially successful in reducing the risk of CMV infection. Seropositive CMV patients may reactivate when immunosuppressed, and interferon but not aciclovir reduces this risk. Congenital CMV infection has a variable outcome. Normal individuals who contract CMV infection rarely suffer any sequelae, but in immunocompromised patients, blindness due to retinitis, graft rejection and death from pneumonitis, hepatitis and disseminated CMV infection or opportunistic infection may occur.

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