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Title: Active cytomegalovirus infection in non-immunosuppressed children with chronic respiratory disease

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Body: Cytomegalovirus (CMV) is reactivated in lower respiratory tract in the context of local or systemic inflammatory processes, increasing its morbimortality. Objective: To set the incidence of active CMV infection in children with chronic respiratory diseases and no acute exacerbation. Material and methods: Mixed retrospective-prospective study (May 2009-September 2011) of non-immunosuppressed children who underwent a diagnostic bronchoscopy. The serological test for the CMV was performed using CLIA (DiaSorin, Italy). Detection and quantification of DNA in respiratory samples and plasma by PCR QRT-PCR in the m2000RT system (AbbottDiagnostics, USA). Results: 36 patients (45% male), mean age 5.5 years. Underlying diseases were cystic fibrosis(10), middle lobe syndrome(6), laryngotracheomalacia(4), poorly controlled asthma(3), obliterans bronchiolitis(2), interstitial lung disease(2), tracheostomy complications(2), bronchiectasis(2), persistent atelectasis(2), bronchial sequelae after bronchial tuberculosis (1), pulmonary hypoplasia(1) and pulmonary hemosiderosis(1). 11 patients were IgG positive. CMV DNA detected in 6 respiratory samples (16.6%; 54.5% of the IgG positive population), 4 in bronchoalveolar lavage and 2 in bronchoaspirated. Viral DNA detected in plasma in two of them. The mean viral load at respiratory samples was 180 copies/mL (range 27-815 copies/mL) and in plasma 18 and 123 copies/mL. All the positive CMV children were under inhaled corticosteroid treatment. Conclusion: Active CMV infection is common in non-immunosuppressed children with chronic respiratory disease. Prospective studies should elucidate the effects of CMV replication in their lower respiratory tract and clinical evolution.