

A Case of Common Variable Immunodeficiency in a Patient with Recurrent Myopericarditis

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Background: Chronic lung disease, gastrointestinal pathology, and various autoimmune diseases frequently characterize Common Variable Immunodeficiency.

Methods: We are reporting an unusual case of CVID found in a patient with recurrent myopericarditis.

Results: Our patient is a 17 year old boy who presented for immunologic evaluation following two episodes of myopericarditis. His most recent bout of myopericarditis was characterized by chest pain, an abnormal EKG with ST-T wave changes and elevated cardiac enzymes [troponin (max of 11.67) and creatine kinase (max of 1099)]. The echocardiogram at the time of presentation revealed questionably low-normal to mildly reduced left ventricular function. An infectious etiology of the myopericarditis was not uncovered. Antibodies to adenovirus, coxsackie virus, EBV, CMV, ECHO virus, chlamydia, lyme, and Q fever were negative. His autoimmune evaluation yielded negative results for ANA, Rheumatoid factor, ANCA panel, Anticardiolipin IgA and IgM, anti-RNP antibodies, and anti-Smith antibodies. Anticardiolipin IgG revealed an indeterminate result, and his Raji cell quantitative assay was positive.

Infection history revealed that our patient had distant episodes of sinusitis, otitis medias and bronchitis. Additionally, gastroenteritis secondary to Salmonella was diagnosed in the past. Complaints at the time of initial consultation consisted of chronic fatigue and intermittent joint pain.

As part of our patient's extensive work-up, immunoglobulins were requested. He was found to have depressed levels of IgG, IgM, and IgA. Immunoglobulins were repeated several months later because the first set was checked following a prolonged course of prednisone. Nine months following the discontinuation of the systemic steroids, immunoglobulins continued to be low (IgG 446, IgA 8, IgM 8). His complete lymphocyte screen demonstrated normal numbers of T, B, and NK cells. Antibody titers were evaluated. ABO titer revealed an anti-B of 2. Despite a recent Pneumovax, he did not mount an antibody response to any of the tested pneumococcal serotypes (all titers <1.3). Additionally, he was not immune to diphtheria (<0.10), measles, mumps, or hepatitis B (<3.0), and had indeterminate immunity to tetanus (0.45) and rubella. He retained immunity to Varicella; he had the disease as a child.

Intravenous gammaglobulin was recommended. Our patient is currently tolerating treatment and has had no further episodes of myopericarditis. His EKG and echocardiogram have normalized.

Conclusion: There are multiple etiologies of myopericarditis including various infections, hypersensitivity reactions, cardiotoxic medications, and underlying systemic

disease. Immune defects should be a considered in the differential, especially when unusual diseases recur.