

Prevalence of abnormal cardiac wall motion in the cardiomyopathy associated with incomplete multiplication of Epstein-barr Virus and/or cytomegalovirus in patients with chronic fatigue syndrome.

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We reported unique incomplete herpesvirus (Epstein-Barr Virus (EBV) and/or nonstructural (HCMV) cytomegalovirus) multiplication in 2 distinct subsets of CFS patients. The CFS subsets were identified by: a) presence of IgM serum antibodies to HCMV nonstructural gene products p52 and CM2 (UL44 and UL57), and/or b) IgM serum antibodies to Epstein-Barr virus viral capsid antigen (EBV, VCA IgM). Diagnostic IgM serum antibodies were found in two independent blinded studies involving 49 CFS patients, but the same antibodies were absent in 170 control patients ($p < 0.05$). Abnormal 24 Hr-electrocardiographic monitoring, tachycardias at rest and, in severe chronic cases, abnormal cardiac wall motion (ACWM) were seen in these same CFS patients. We now report a prospective consecutive case control study from 1987--1999 of cardiac dynamics as measured by radionuclide ventriculography in 98 CFS patients from 1987--1999. Controls were patients with various malignancies who were evaluated in protocols requiring radionuclide ventriculography before initiation of cardiotoxic chemotherapeutic agents. The prevalence of abnormal cardiac wall motion (ACWM) at rest in CFS patients was 10 out of 87 patients (11.5%). With stress exercise, 21 patients (24.1%) demonstrated ACWM. Cardiac biopsies in 3 of these CFS patients with ACWM showed a cardiomyopathy. Among the controls, ACWM at rest was present in 4 out of 191 patients (2%) ($p = 0.0018$). A progressive cardiomyopathy caused by incomplete virus multiplication of EBV and/or HCMV in CFS patients is present.

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