

A specific enzyme-linked immunosorbent assay (ELISA) procedure for detection of heterophile Hanganutziu and Deicher (HD) antibodies

Abstract:

A specific, relatively sensitive, quantitative and standardized enzyme-linked immunosorbent assay (ELISA) procedure was developed for the detection of heterophile Hanganutziu and Deicher (HD) antibodies which are occasionally elevated in pathologic human sera. The HD antigen-active molecule used for the assay was a ganglioside (N-glycolylneuraminylactosylceramide, abbreviated as NeuGc-LacCer) previously purified from horse erythrocyte membranes. The test used antigen-coated plastic microtiter plates and anti-human immunoglobulin G (IgG, Fab fragment) conjugated with alkaline phosphatase. Fifty-four normal human sera gave ELISA values ranging from -2 to 2%. Random sera from hospitalized patients were first screened by the horse erythrocyte hemagglutination (HA) test, whereby 5.7% (76 cases) gave abnormal HA titers of 128-4096 compared to titers in normal sera equal to or less than 64. Ninety-seven % of the patients' sera gave abnormal ELISA values (3-200%). They were classified into 3 groups: cancer (42 cases), infection (10 cases), and others (24 cases). The potential value of this ELISA method is discussed.