Abstract

An enzyme-liked immunosorbent asay was developed for detecting anti-EBV IgA in sera of patients with nasopharyngeal carcinoma (NPC). EBV solution antigen was prepared by extracting B95-8 cell line with 0.05 M carbonate buffer pH 9.6 and 10 μg/ml soluble antigen was coated on 96 wells microtiter plate at 37° C for 3 hours. Tested sera were diluted 1:80 and read as optical density (O.D.) at 480 nm using H_2O_2 as substrate for horseradish peroxidase conjugated anti human IgA (alpha chain). The developed ELISA was used for the determination of anti-EBV IgA in 42 NPC-, 26 N-NPC-, 8 positive anti herpes virus group-, and 8 rheumatoid factor sera.

The preliminary cut-off value as determined by $\bar{X}$+2SD of O.D. from normal serum group was 0.180 in the ELISA. Base on this criterion, 29(69.05%) sera from NPC group were considered IgA-positive whereas only 5(19.23%) from N-NPC gave anti-EBV IgA positive. When B95-8 cells were used as antigen and 1:40 IgA titer as normal level in the conventional IF procedure, 26(61.90%) of the same set of 42 NPC sera as well as 1(3.85%) of the 26 N-NPC were found IgA positive. These results seem to correspond with those of the ELISA. In addition, only one from eight sera of positive anti-herpes virus group and none of eight sera with rheumatoid factor was IgA-positive by ELISA.

As ELISA showed higher specificity and sensitivity than IF test in this study, it must be more beneficial for the screening of anti-EBV IgA in sera of large population and also for the estimation of the disease state in NPC patient.