AN ANALYSIS OF THE RELATIONSHIP BETWEEN CLINICAL PATHOLOGY
AND SEROLOGICAL LEVEL OF EB VIRUS VCA-IgA ANTIBODY IN
NASOPHARYNGEAL CARCINOMA

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SUMMARY

Nasopharyngeal carcinoma (NPC) is one of the common malignant tumors in Fujian Province, China. By using the indirect immunoperoxidase labelled antibody method, the antibody level of 363 cases and the relationship to histopathological changes were studied. Among these cases, 127 were untreated NPC with a positive rate for IgA anti-VCA antibody of 91.3% (GMT 1:33). Forty two of the 363 cases had other tumors of head and neck with a positive rate of 7.1% (GMT 1:8) while none of 53 cases of chronic nasopharyngitis and 141 cases of normal individual had detectable antibody. Since this assay has a significant specificity, it is used as an effective serological diagnostic tool for NPC in our clinic.

The serological level of VCA-IgA antibody in untreated NPC cases correlated with the duration of disease, the size of the metastatic lymph node, the proportion of NPC parenchyma and the degree of plasma cell infiltration in tumor tissues. No significant relationship was found between the VCA-IgA antibody level and the sex, age, original site of the tumor, mode of tumor growth and the relationship between HLA-type and survival in this patient population.
INTRODUCTION

Nasopharyngeal carcinoma (NPC), is one of the more common malignant tumors in Fujian. The close relationship between EB virus and NPC has been discussed (Henle and Henle, 1976; Ho et al., 1976; Klein et al., 1974). Although the level of EB virus VCA-IgA serum antibody is high in NPC patients, its clinical and pathological significance remains unsettled. As an attempt to solve some of the problems, the following studies were undertaken.

MATERIALS AND METHODS

This report was based on 363 individuals including 127 NPC patients and 236 control cases collected within 1980-1981 from our NPC clinic. With application of the indirect immunoperoxidase technique, EB virus VCA-IgA serum antibody was examined. 222 nasopharyngeal biopsy specimens from all of the patients (141 normal subjects were excluded) were obtained. Paraffin sections were routinely processed and studied. The PAP technique was used for IgA, IgG and IgM in tissue plasma cells from 68 cases of NPC and 40 cases of chronic nasopharyngitis.

RESULTS AND DISCUSSIONS

I: EB virus VCA-IgA serum antibody in NPC patients before treatment and in control groups.

The positive rate of VCA-IgA serum antibody in the 127 NPC patients before treatment was 91.3% (GMT 1:33) as compared to only 7.1% (GMT 1:79) in the 42 patients with other head and neck tumors. None of the serum samples from 53 patients with chronic nasopharyngitis or 141 normal subjects had detectable IgA anti-VCA antibody. Thus, the test has been routinely used in our NPC clinic as a simple and reliable serodiagnostic method for NPC.

II. Relation between level of EB virus VCA-IgA serum antibody and clinical characteristics of NPC patients.

Levels of VCA-IgA serum antibody in 127 NPC patients were analyzed according to clinical stages by using National TNM staging system proposed in 1979. A correlation between VCA-IgA serum antibody and disease stage was apparent (Table 1). Patients with a short survival (less than 1 year) were less likely to have elevated titers (10.4%) and had a lower GMT (1:29) than those with a longer survival (29%, GMT=1:47) (Table 2).