

Nature of Malaria Cold-Reactive Anti-Lymphocytotoxin Antibody

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OBJECTIVE : To determine the target cell population and the chemical nature of lymphocytotoxic antibodies in sera from patients infected with malaria.

BACKGROUND : Initial studies in this Laboratory have demonstrated the presence of anti-lymphocytotoxin antibodies in the sera of patients infected with falciparum or vivax malaria (1). These antibodies have anti-lymphocytotoxic activity at 15°C and are effective in destroying allogenic, as well as, autologous lymphocytes. Although the *in vivo* relevance of these antibodies is unclear, recent interest has focused on the relationship of these antilymphocytotoxic antibodies and the decrease T cell numbers found in the peripheral blood of patients infected with malaria (2). Our continued investigation in this area is presently concerned with determining the antibody class of the lymphocytotoxin (IgG, IgM, IgA) and the lymphocyte population that the lymphocytotoxins are directed against, with the aim of understanding the *in vivo* relevance of anti-lymphocytotoxic antibodies.

METHODS : Human peripheral blood mononuclear cells will be obtained from freshly drawn blood by fractionation over Ficoll-Hypaque gradients according to the method of Boyum (3). Isolation of human lymphocyte subpopulations will be carried out using current modifications (4, 5) of previously described methods (6). Cytotoxin assay will be performed using the modification of Terasaki's methodology (1) previously described. The nature of the antilymphocytotoxin antibodies will be investigated using a standard absorption technique and double antibody radioimmunoassay (4).

RESULTS : The column cell separation assays have been set up and are presently being standardized; consequently no information is presently available on the target cell specificity of the lymphocytotoxins.

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