The detection of circulating antigen of Toxoplasma gondii in sera of patients with acquired immunodeficiency syndrome

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Disseminated toxoplasmosis is a common and severe opportunistic infection in AIDS patients. Unfortunately, conventional serological tests for detection of antibodies are rather unsuitable for diagnosis of acute toxoplasmosis in such patients. Commonly only low anti-toxoplasma IgG antibody titers can be demonstrated in sera of AIDS patients suffering from acute toxoplasmosis, and specific lgM antibodies are apparently not detectable at all. Thus, negative test results do not rule out active toxoplasmosis in patients with AIDS. Other diagnostic methods particularly trials for isolation of the parasite from large amounts of blood or from brain biopsies may involve considerable risks for the patient. Therefore, there is a strong need for alternative immunological techniques; the detection of parasite an tigens circulating in serum may prove useful for diagnostic purposes.

We have established an ELISA for the detection and measurement of circulating toxoplasma antigen in sera. Until now (November 1986) we have tested 36 sera of AIDS patients quantitatively for antigen and simultaneously for IgG and IgM antibodies. The relations between serological data and clinical Eindings are still under investigation. Our aim is to establish an efficient serological procedure for the rapid diagnosis of life threatening toxoplasmosis in immunodeficient patients.