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Serology in the diagnosis of Acute Toxoplasmosis in HIV Infected Persons and AIDS Patients.

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Serological parameters usually are considered little indicative for the diagnosis of acute toxoplasmosis in patients with AIDS. Nevertheless, if data of long-term studies are analysed, some regularities of antibody formation in patients with acute toxoplasmosis are detected.

In a period of 75 month we have screened more than 3000 samples (mostly sera and cerebrospinal fluids) of 748 HIV infected persons for IgG, IgM, IgA antibodies, and circulating antigen specific for Toxoplasma gondii, and for parasite appearance. During this time we noted an incidence of acute toxoplasmosis (primary infections; CNS-, and pulmonary infections due to reactivations) of 8 %; 56 % of our patients had latent infections.

A retrospective analysis of our results showed that specific IgG antibodies were present in the sera of all patients with acute infections, usually in moderate or even in high titres. The titres of this antibody class increased after the onset of symptoms reaching a peak after about 50 days. IgM were only found in patients with a primary infection, this type of infection was restricted to persons with high CD4 T-cell counts. Specific IgA antibodies were detected in 50% of the acute infections, usually only in borderline titres. Circulating antigens were present in only a very small number of samples, nevertheless, its detection seems to have a very high positive predictive value.

To sum up we believe that titration of specific antibodies and detection of circulating antigens are very useful for the diagnosis of an acute infection in cases of a rapid differential diagnosis and if the toxoplasmosis status of the patient has been determined previously. Thus, the effort of a regular toxoplasmosis screening of HIV infected persons and the monitoring of the tire trends may save costs as well as lives at time of reactivation.