339 SIGNIFICANCE OF PCR IN RAPID DIAGNOSIS OF ACUTE TOXOPLASMOSIS

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Acute toxoplasmosis always requires rapid diagnosis in order to initiate an adequate chemotherapy as early as possible. Laboratory tests for detection of specific antibodies often do not yield conclusive results; this is particularly the case with immunocompromised patients, e.g. suffering from AIDS. Methods for direct detection of the parasite have therefore great significance. In recent years Polymerase-chain-reaction (PCR) has become a particularly promising additional tool for laboratory diagnosis of toxoplasma infections.

We have established PCR in our laboratory as a routine method for rapid diagnosis and have collected experience throughout more than a year, particularly with AIDS-patients with suspected toxoplasmosis. Our target DNA is a sequence of 194 bp length of the highly repetitive 61-gene of *Toxoplasma gondii.*

Altogether we have tested more than 200 samples of different materials, namely cerebrospinal liquors, induced spute and material from bronchial lavages and finally lymph node biopsies from AIDS-patients with and without toxoplasmosis. In most cases positive PCR-results confirmed clinical suspicion of acute toxoplasmosis as well as serologic and/or pathologic results. In several cases a positive PCR was even the only laboratory test detecting the acute toxoplasmosis; this experience was particularly made in patients with acute toxoplasmosis of the CNS. On the other hand positive PCR-results were obtained from induced sputa and materials from bronchial lavages respectively from patients who did not show any clinical symptoms of acute pulmonary toxoplasmosis.

Our results demonstrate the importance of PCR as a tool for rapid diagnosis of acute toxoplasmosis on one hand, but show on the other that misinterpretations may be possible. This emphazises again the necessity of close cooperation between clinicians and the laboratory.