096

IDENTIFICATION OF PNEUMOCYSTIS CARINII IN CLINICAL SPECIMENS BY DIFFERENT METHODS

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Due to improved chemoprophylactic measures the incidence of severe pneumocystis pneumonia (PcP) has declined considerably in patients infected with HIV-1, however, an increasing number of persons continually excrete low amounts of Pneumocystis carinii. Direct fluorescent antibody tests (FAT) for the detection of this pathogen seem to be too sensitive for a discrimination between cli nically relevant, acute and subclinical, chronic infections, especially if this method is used for testing samples of induced sputum. For a Jong-term surveillance of patients at risk of acquiring a PcP more specific and less personnel expending tests are needed. From this point of view we compared a FAT with a dot-ELISA for the detection of soluble Pneumocystis antigen and with a PCR an genomic Pneumocystis DNA in different clinical specimens (n = 370) and correlated the results to clinical data. The best correlation was found between the PCR and the antigen-ELISA (77%), and the pre dictive value of a negative result was very high for the antigen ELISA (up to 100 depending an the standard of comparison). We conclude that the antigen-ELISA is superior to the other identification methods (including staining procedures) due to its reliability for purposes of differential diagnosis, to a high correlation to clinically relevant infections and to moderate costs and duration.