

PNEUMOCYSTIS CARINII INFECTIONS IN HIV-NEGATIVE PATIENTS: CLINICAL OUTCOME VERSUS PARASITOLOGICAL EVIDENCE

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Pneumocystis carinii is well known as a widespread, main pulmonary pathogen in patients with AIDS. Nevertheless, data on the frequency of the infection and on the incidence of *P. carinii* pneumonia in HIV-negative patients are rare, the precise epidemiology is therefore still unknown. The recent development of diagnostic techniques with a high sensitivity, e.g. polymerase chain reaction, allows the detection of symptomless, low amount carriers. Therefore, in a prospective study the prevalence of *P. carinii* infected persons and the frequency of *P. carinii* pneumonia in a collective of immunocompetent adult patients with chronic lung disease were determined.

Within a surveillance period of one year several bronchoalveolar lavage fluid samples of 77 patients (44 males, 33 females; age on an average: 49.8 years, range: 22-87), most of them with tuberculosis (26 %) or a bacterial pneumonia (21 %), were examined by Diff-Quik stain, direct immunofluorescence test, and polymerase chain reaction for *P. carinii*. Five patients (6.5 %) were found infected by polymerase chain reaction and direct immunofluorescence test, but not by the conventional staining technique. Although the 77 patients were not treated against *P. carinii* pneumonia, none of the patients developed a clinically significant episode of a *P. carinii* pneumonia within the surveillance period. Thus, the exclusive detection of *P. carinii* in bronchoalveolar lavage fluid samples does not justify the diagnosis of *P. carinii* pneumonia or the introduction of a specific therapy.

The evidence of the existence of clinically silent, immunocompetent carriers of *P. carinii* is getting conclusive at present as well as the evidence of an ubiquitous distribution of this parasitic fungi. The use of direct detection methods with a high sensitivity seems to be necessary for any epidemiological survey whereas *P. carinii* pneumonia is more sufficiently diagnosed by a combination of indirect procedures like arterial blood gas analysis and quick, simple staining techniques.