

P0044

Poster Session I

How to improve fungal diagnosis

REAL-TIME PCR FOR PNEUMOCYSTOSIS DIAGNOSIS IN NON-HIV PATIENTS

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Objectives

Pneumocystosis frequency is known to increase among HIV negative patients. In this context, we set up a 6 years retrospective study to evaluate the respective performances of microscopical diagnosis and real-time PCR for patients admitted in our institution.

Methods

From January 2005 to December 2011, samples (swab, broncho-aspiration or broncho-alveolar lavage) from patients with clinical suspicion of *Pneumocystis jiroveci* pneumonia were collected. Microscopical examination after Giemsa and Gomori-Grocott staining and real-time PCR were performed. Demographic, clinical and radiological data from patients (including age, sex, risk factors, symptoms, chest computed tomography scan and treatment) were collected at diagnosis. Categorical variables were analysed with Chi-square test or with Fisher's exact test, as appropriate. Continuous variables were analysed by Student's t test. Difference was considered significant if p-value was below 0.05.

Results

14577 samples were received from patients with a clinical suspicion of pneumocystosis. 400 patients had a positive mycological diagnosis of pneumocystosis, based on microscopical examination and/or real-time PCR. 116 patients were HIV positive and 284 patients were HIV negative. Microscopical examination was positive for 35.5% of the patients (142/400) and real-time PCR was positive for 64.5% (258/400) of the patients. Microscopical examination was more frequently positive in HIV positive patients than in HIV negative patients ($p < 0.001$). Most patients received sulfadoxin-pyrimethamin (94.5%, 378/400), followed by pentamidin (3.7%, 15/400) and atovaquone (1.7%, 7/400). The treatment was not different according to the test used for diagnosis.

Conclusion

We have evidence that pneumocystosis is more frequent in HIV negative than in HIV positive patients in our studied population. Real-time PCR is needed to exclude pneumocystosis diagnosis in HIV negative patients due to the lack of sensitivity of microscopical examination. Anti-*Pneumocystis* treatment was similar between patients with a positive microscopical examination and patients with a positive PCR alone, confirming confidence in results obtained from real-time PCR.