

Exploration of the Role of Chlamydia Pneumoniae and Mycoplasma Pneumoniae Infections in Asthma at a Reference Clinical Center in Belgium

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RATIONALE: The role of Chlamydia pneumoniae and Mycoplasma pneumoniae in asthma pathogenesis remains debated. We have conducted a retrospective study to compare the prevalence of positive serologies in asthma patients seen in a single asthma clinic in Belgium, and to evaluate its impact on the inflammatory pattern in the bronchi, on the obstructive disorder present with respiratory tests, on the severity of symptoms and on atopy. **METHODS:** Retrospective study from the database of the asthma clinic including 499 patients with serologic determinations of Mycoplasma and Chlamydia pneumoniae. **RESULTS:** The prevalence of IgA and IgG towards Chlamydia pneumoniae were 35 and 62% respectively. The prevalence of positive serology to Mycoplasma pneumoniae was lower reaching 3% and 10% for IgM and IgG respectively. Patients with positive IgA towards C. pneumoniae displayed greater neutrophil sputum counts (p value of 0,0141) and higher fibrinogen levels (p value of 0,0055). As for lung function, patients with positive IgA towards C. pneumoniae had lower pre, but not post, bronchodilatation FEV₁ (p value of 0,0243) compared to negative IgA towards C. pneumoniae. There was no association between IgA to C. pneumoniae and asthma control and quality of life. Patients positive to IgG did not differ from the other patients. Serologic positivity to Mycoplasma was not associated with any type of inflammatory or lung function feature. **CONCLUSION:** Positive serologic test to C. pneumoniae is more common than positive M. pneumoniae serology. Patients with IgA towards C. pneumoniae have more intense airway neutrophilic inflammation associated with a slightly raised level of plasma fibrinogen and slightly decreased FEV₁.

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