Chlamydophila pneumoniae, Mycoplasma pneumoniae infections, and asthma control.


Source

Department of Allergology, Medical University of Gdansk, Poland. specjalski@poczta.onet.pl

Abstract

The influence of respiratory infections on asthma has not been fully understood. Acute viral and bacterial infections often lead to exacerbations. Less is known about the role of chronic infections, particularly with atypical pathogens. The aim of this study was to evaluate the impact of Chlamydophila pneumoniae and Mycoplasma pneumoniae infections on the control and severity of asthma. Spirometry, skin-prick tests as well as measurement of immunoglobulin G (IgG), IgM, and IgA against C. pneumoniae and M. pneumoniae (ELISA) were performed in 95 patients with persistent asthma and 58 healthy controls. Additionally, in the selected group of asthmatic patients, presence of C. pneumoniae and M. pneumoniae genetic material was tested in induced sputum (polymerase chain reaction [PCR]). IgA against C. pneumoniae was found in 42 (44.2%) asthmatic patients and 17 (29.3%) controls (p < 0.05). It was found more often in the group with uncontrolled asthma (p = 0.001) as well as in nonatopic asthmatic patients (p < 0.05). IgG was detected in 58 asthmatic patients (61%) and 21 (36.2%) controls, more often in cases of uncontrolled (p < 0.05) and nonatopic asthma patients (p < 0.05). Such correlations were not found in relation to M. pneumoniae infections. C. pneumoniae was detected by means of PCR in respiratory secretions of eight asthmatic patients (40%), and M. pneumoniae was detected in two asthmatic patients (10%). In conclusion, C. pneumoniae infections are more frequent in asthmatic patients compared with healthy individuals and in nonatopic asthmatic patients compared to atopic patients. Chronic infection is associated with poor control of asthma.

PMID:21439159