

CORRESPONDENCE

Clarithromycin in treatment of acute asthma exacerbations: Principles of appropriate antibiotic use

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To the Editor,

We read with a great interest the article by Koutsoubari et al. (1) in *Pediatr Allergy Immunol*. In this study, authors compared two groups, with ($n = 18$) or without ($n = 22$) a 3-week supplementary clarithromycin therapy, who were admitted to the hospital with acute attacks of mild persistent or intermittent asthma and whose symptoms were analyzed at 3, 6, and 12 weeks. The number of symptom-free days was found to be higher in the clarithromycin group than in the control group, and the therapy was found to be effective in preventing subsequent symptoms (as measured by symptom-free days), and reducing the number and severity of periods of asthma during the next 3 months. A significant increase in FEV1 was detected in the clarithromycin group compared with pretreatment, at 3 and 6 months, but the control group did not differ.

Microbiological assessment found positive cases of nasal wash samples in 26 cases (18 rhinovirus, three adenovirus, two parainfluenza virus, three mycoplasma, a respiratory syncytial virus). However, we believe that this study would benefit from a few comments in several points.

The authors in this study noted that clinical and laboratory follow-ups in the clarithromycin group were better than control group reported because of the impact of anti-inflammatory antibiotics. In spite of the known anti-inflammatory and immunomodulatory effects of clarithromycin, long-term effects in patients with asthma are controversial (2).

Long-term anti-inflammatory therapy must be used in asthma characterized with chronic eosinophilic inflammation and bronchial hyper-reactivity for symptoms control. Antibiotics used for anti-inflammatory action are not suitable for the principle of rational antibiotic use: The rapid rise of antibiotic resistance is an accepted fact throughout the world. In particular, *Mycoplasma pneumoniae*, *Helicobacter pylori*, and *Streptococcus pyogenes* have very high levels of resistance and are associated with treatment by clarithromycin. (3–5). Antibiotics resistance was not surprising to be found in Greece, where clarithromycin is commonly used (6). Thus, acute asthma-attack therapy by antibiotics would result in serious problems in terms of antibiotics resistance. For rational antibiotic use, macrolids should be used for such cases as cystic fibrosis, bronchiectasis, chronic obstructive pulmonary disease, and where atypical bacterial infections have been observed in cases of asthma problems. Consequently, when antibiotics are being used for anti-inflammatory effects, antibiotic resistance should be considered to adhere to rational antibiotic usage.

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