



CORRESPONDENCE

Impact of macrolide therapy on mortality in severe sepsis caused by pneumonia

To the Editors:

We read with interest the recent paper by RESTREPO *et al.* [1] who reported that adding a macrolide to the antibiotic regimen in patients with community-acquired pneumonia (CAP) and severe sepsis resulted in lower mortality. Their data are very promising. However, we have a concern regarding the recommendations to implement macrolides as standard treatment for CAP.

Treatment with macrolides has been shown to have beneficial effects in chronic inflammatory airway diseases such as diffuse panbronchiolitis [2] and cystic fibrosis [3]. Whether adding macrolide therapy to the antibiotic regimen in patients with sepsis and CAP will result in a better outcome cannot be concluded from the study performed by RESTREPO *et al.* [1]. Their nonrandomised study did not provide information regarding clinical decisions such as why some patients were given macrolide therapy and others were not. Moreover, we are not informed about the presence of infections caused by *Legionella pneumophila* type 1 which are relatively common in patients with severe CAP [4]. Adding macrolide therapy is one of the choices of treatment in infections caused by this microorganism.

The conclusion of RESTREPO *et al.* [1] recommended further prospective studies. In 2005, we published a prospective randomised study in which we compared a pathogen-directed therapy, based on monotherapy, with an empirical approach consisting of a betalactam antibiotic and a macrolide in patients with CAP [5]. In that study, we showed that both treatment regimes resulted in comparable efficacy. In patients with severe CAP who were referred to the intensive care unit, combination treatment, including a macrolide and a betalactam antibiotic, resulted in a significantly higher mortality rate. Although this group of patients was relatively small, we are not convinced that adding macrolide therapy to patients with

CAP will result in the same beneficial effects as seen in chronic inflammatory airway diseases such as cystic fibrosis and diffuse panbronchiolitis, unless atypical pathogens sensitive for macrolide therapy are present. Concerning the increasing rate of microbial resistance due to antibiotic overuse, we need to be very careful when deciding to add macrolide therapy for immunomodulation reasons in patients with CAP.

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Paradoxical movement of the lower ribcage in COPD

To the Editors:

The paper by ALIVERTI *et al.* [1], which appeared in a recent issue of the *European Respiratory Journal*, suggests that the presence of paradoxical movement of the lower ribcage at rest in chronic obstructive pulmonary disease (COPD) patients is associated with early onset hyperinflation of the chest wall and predominant dyspnoea at end exercise. ALIVERTI *et al.* [1] stated

that this paradoxical movement has not been related to other forms of respiratory behaviour or symptoms.

However, this is not exact since my group has evaluated the frequency and clinical characteristics of the paradoxical movement of the lower ribcage (classically, Hoover's sign) in patients with COPD. Hoover's sign is easy to recognise and has a good interobserver agreement [2]; it is a frequent finding in

patients with moderate to severe COPD (36% of moderate to 76% of very severe patients) [3]. In my group's own studies, we found that the presence of the paradoxical movement of the lower ribcage was independently associated with a higher degree of dyspnoea (both at rest and after exercise) and higher use of health resources, including hospitalisations [4]. For this reason, we proposed the inclusion of this sign among the data useful for predicting outcomes in COPD [5].

The paper by ALIVERTI *et al.* [1] adds interesting information and reinforces the usefulness of including this frequently forgotten sign in the physical examination of COPD patients.

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From the authors:

We thank E. Garcia-Pachon for his interest in our paper. We are familiar with his previous work, which showed a relationship between the presence of Hoover's sign detected clinically and some measures of the severity of chronic obstructive

pulmonary disease (COPD), such as dyspnoea and hospitalisation rate [1].

Our previously published paper [2] proposed a new method for quantitative description of lower ribcage paradoxical motion and showed a clear relationship between the degree of paradox at rest, operational chest wall volume changes and symptoms during exercise. This approach allowed us to define objectively what was being measured and relate this measurement to clinically relevant outcomes, such as the pattern of chest wall dynamic hyperinflation and the symptoms that limit exercise.

Before proposing these quantitative descriptors as an independent parameter and therefore as an aid for diagnosis in COPD, a number of issues are still to be determined in a larger population of COPD patients. These include the relationship of paradoxical lower ribcage movement to more traditional pulmonary function tests, the correlation with clinical detection of Hoover's sign in different postures, and the role played by the diaphragm and abdominal muscles in the generation of the asynchrony. The availability of objective measurements such as the one we describe should help us better understand the physiological basis that underpins Hoover's sign and help extend its use in everyday clinical practice.

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