

CORRESPONDENCE

Azithromycin and severe asthma

Brusselle *et al*¹ performed an interesting academic-based randomised controlled trial Azithromycin for Prevention of Exacerbations in Severe Asthma (AZISAST) of azithromycin 250 mgm taken thrice weekly versus placebo as add-on therapy for 26 weeks in non-smoking patients with severe asthma, defined as Global Initiative for Asthma (GINA) steps 4–5, taking high dose inhaled corticosteroids/long-acting bronchodilators and with at least two severe exacerbations within 6 months of study entry. In the half of subjects with lower blood eosinophil counts ($\leq 200/\mu\text{l}$) they detected a significant effect on the primary endpoint (severe exacerbations and/or lower respiratory tract illnesses requiring antibiotics) and also on asthma quality of life (AQL). These results lend additional empirical evidence to support my clinical experience that a significant subgroup of patients with uncontrolled severe asthma will experience important clinical benefits from azithromycin, and that this benefit appears to be ‘all-or-none’.² My most recent primary care-based trial confirmed this ‘all-or-none’ response pattern and also found that response persisted long after the azithromycin treatment was completed.³ The primary care severe asthma subjects differed from the AZISAST subjects by including smokers and having worse AQL at randomisation (AQL 4.12 v 5.35 in AZISAST). Many of these primary care responders identified themselves correctly as good candidates for azithromycin.⁴

A pilot trial provided preliminary data that *Chlamydia pneumoniae* IgA, but not IgG, might be a predictor of treatment response and this needs to be studied further as another possible relevant biomarker.⁵ I believe that AZISAST brings us closer to the time when we will understand the mechanisms underlying the azithromycin-asthma response and be able to categorise candidates for treatment, but I do not think that we are there yet.

David L Hahn

Correspondence to Professor David L Hahn, Department of Family Medicine, University of Wisconsin School of Medicine and Public Health, 1100 Delaplaine Court, Madison, WI 53715, USA; dlhahn@wisc.edu

Competing interests None.

Provenance and peer review Not commissioned; internally peer reviewed.

To cite Hahn DL. *Thorax* 2013;68:387.

Received 13 January 2013
Accepted 15 January 2013
Published Online First 7 February 2013



► <http://dx.doi.org/10.1136/thoraxjnl-2012-202698>

Thorax 2013;68:387.
doi:10.1136/thoraxjnl-2013-203256

REFERENCES

- 1 Brusselle GG, Vanderstichele C, Jordens P, *et al*. Azithromycin for prevention of exacerbations in severe asthma (AZISAST): a multicentre randomised double-blind placebo-controlled trial. *Thorax* 2013;68:322–9.
- 2 Hahn DL. Treatment of *Chlamydia pneumoniae* infection in adult asthma: a before-after trial. *J Fam Pract* 1995;41:345–51.
- 3 Hahn DL, Grasmick M, Hetzel S, *et al*. Azithromycin for bronchial asthma in adults: an effectiveness trial. *J Am Bd Fam Med* 2012;25:442–59.
- 4 Hahn DL. An unanticipated effect of clinical trial registration. *BMJ* 2007. <http://www.bmj.com/content/325/7376/1314?tab=responses> (accessed 29 Jan 2013).
- 5 Hahn DL, Plane MB, Mahdi OS, *et al*. Secondary outcomes of a pilot randomized trial of azithromycin treatment for asthma. *PLoS Clin Trials* 2006;1:e11.