Azithromycin and severe asthma

Brusselle et al 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 (≤200/μl) 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’. 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. 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.

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. 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.

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