

## ASTHMA AND INFECTION – INFORMATION FOR INTERESTED PHYSICIANS

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### *Should I treat my patient for “infectious” asthma?*

An emerging body of evidence suggests that half of asthma – in both children and adults – is associated with chronic lung infection with the atypical organisms *Chlamydia pneumoniae* (*Cp*) and *Mycoplasma pneumoniae* (*Mp*):

- in bronchoscopic studies of lavage fluid over 50% of pediatric asthma is positive for *Cp* and over 50% of adult asthma is positive for *Cp* and/or *Mp*
- in uncontrolled treatment studies pediatric and adult asthma patients had major asthma improvement (or even complete remission) associated with microbiologic eradication
- a published pilot randomized clinical trial in adults found that azithromycin was associated with symptomatic improvement; and 50% of treated subjects reported clinically significant decreases in rescue medication and/or improvement in asthma quality-of-life
- a follow up study is showing that patients with severe, uncontrolled asthma appear to benefit most from treatment

Current evidence is insufficient to justify blanket recommendations for antibiotic treatment. Based on the information presented above, patients with hard-to-control asthma who are not responding to conventional anti-inflammatory treatments are seeking antibiotics (see [www.asthmastory.com](http://www.asthmastory.com) for an informative patient perspective accompanied by an extensive literature review). In addition to severe asthma patients, new-onset asthma patients may opt for empiric antibiotics prior to accepting chronic steroid therapy.

### *Should I select patients on the basis of laboratory testing?*

I do not recommend selecting patients on the basis of, for example, blood testing for *Cp* antibodies because:

- it is unknown whether blood tests can predict a treatment response
- other organisms (e.g., *Mp* or unidentified bacteria) may be involved
- the mechanism(s) responsible for treatment response is(are) unknown

### *What treatment do you recommend?*

For adults, I currently recommend either:

- azithromycin, 600 milligram tablets, 1 daily for 3 days, then 1 weekly for 12 weeks, or
- azithromycin 250 milligram tablets, 2 daily (500 mg) for 3 days, then 3 tablets (750 mg) taken all together, once weekly for 12 weeks

I provide patients with the following information:

- this is empirical, non-FDA approved treatment
- continue your usual asthma rescue and controller medications for the time being
- do not expect any response from this treatment for several weeks or months
- if you have no response by 12 weeks, further treatment is not recommended
- if you have a response that wanes after treatment, I recommend re treatment