

## **CORRESPONDENCE**

# **Omeprazole for asthma with gastro-oesophageal reflux**

*To the Editor:*

I would like to congratulate POSTMA and coworkers [1] for their placebo-controlled study on the effects of high-dose omeprazole in patients with severe hyperresponsiveness and gastro-oesophageal reflux (GOR). Previously published reports of the effects of medical antireflux therapy in asthma have claimed effects ranging from improvements in lung function [2], asthma medication requirements, and asthma symptoms to no therapeutic benefit [3]. Limiting analysis to the controlled studies suggests that medical antireflux therapy does not improve lung function, but does improve asthma symptoms [4]. The lack of an effect on lung function reported in the study by D.S. Postma is consistent with the results of the other controlled studies of medical antireflux therapy. The reported lack of an effect on asthma symptoms, however, differs from the findings of the other studies.

There is a strong relationship between GOR and asthma, but the nature of the relationship remains controversial [5]. Both symptomatic and physiological GOR are common in asthma [6]. Moreover, ~60 and 40% of asthmatics have a hiatal hernia and erosive oesophagitis, respectively [7]. Several studies have reported that a sizeable proportion of asthmatics experience reflux-associated respiratory symptoms including cough, dyspnoea and wheezing, and require their rescue  $\beta$ -agonist inhalers when they experience symptomatic GOR [5, 8]. Most reports of the relationship between GOR and asthma have suggested that GOR has an adverse effect on lung function. Proposed mechanisms have included microaspiration and a vagally-mediated oesophago-bronchial reflex. However, studies of the effects of GOR and acid perfusion (AP) of the oesophagus have only shown minimal effects on lung function and an equal number of studies have not shown evidence of an effect [9].

That GOR can cause dyspnoea in the absence of bronchial hyperresponsiveness or abnormal lung function suggests that there may be an alternative mechanism to explain the relationship between GOR and asthma [10]. To understand the effects of GOR on respiratory sensation, nonasthmatics with normal lung function underwent AP [11]. Those patients who experienced discomfort during AP, increased their minute ventilation and respiratory sensation. These observations suggest that discomfort-induced changes in ventilation may at least partly explain the relationship between GOR and asthma and the paradox of medical antireflux therapy improving asthma symptoms, but not lung function [11]. The importance of these findings is that they offer an alternative mechanism to explain the relationship between GOR and asthma and may help the clinician to decide which asthmatics require investigations for GOER and antireflux therapy. It has previously been suggested that all patients with difficult-to-control asthma should be investigated for GOR and it should be treated even if it is asymptomatic [12]. The findings of D.S. Postma and the other reports of controlled studies of medical antireflux therapy would suggest that the costs and

risks of investigating and treating asymptomatic reflux in asthma is not warranted [1, 4].

POSTMA and coworkers [1] did not find that acid suppression therapy improved asthma symptoms. Only nine of the 18 patients treated with omeprazole had heartburn and it was characterized as mild in all cases. In contrast to the findings of the other controlled studies of medical antireflux therapy, they were unable to show an effect of high dose omeprazole on asthma symptoms. In our acid perfusion study, we found a correlation between the severity of heartburn and the changes in minute ventilation and respiratory sensation [11]. The small number of patients with heartburn and its mild nature may explain why POSTMA and coworkers [1] were unable to show that treating reflux improved asthma symptoms and asthma medication requirements.

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### **References**

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