

Correspondence

Reply

To the Editor:

I thank Varadharajan for his response¹ to the current editorial letter.² He notes that it has not been documented that different cell types are related to different symptoms in patients with asthma. He suggests that specific cytokines document specific cells, and I do not disagree with that, because this might be possible. As I understand he disagrees with this conclusion, and I thank him for his contributions. We have performed a study where the aim was to examine the association between specific cell types and airway hyperresponsiveness (AHR) to indirect agents such as mannitol.³ In humans, it is unknown how AHR to mannitol relates to mast cell phenotype, mast cell function, and measures of eosinophilic inflammation in airway tissue. In this study, it was found that AHR to indirect agents is associated with an altered submucosal mast cell profile in individuals with asthma. Furthermore, these mast cells are associated with increased levels of different inflammatory cytokines. Finally, Sverrild et al³ showed that the degree of AHR to mannitol is correlated with the degree of eosinophilic inflammation in the airway submucosa. In animal studies, it has been possible to relate, for example, cough with specific cells,^{4,5} but in human participants we are a long way from relating specific cells or cytokines to spe-

cific symptoms because most patients with asthma are claiming a bucket of symptoms with a clear overlap and not a single symptom such as shortness of breath, wheeze, or cough. I hope that we in the future become more knowledgeable in the area, because this might give the possibility of precision-based medicine.

Vibeke Backer, MD, MDSci

From the Centre for Physical Activity Research, Rigshospitalet, University of Copenhagen, Copenhagen, Denmark. E-mail: backer@dadlnet.dk.

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