Nontuberculous Mycobacterial Pulmonary Infection in Severe Asthma

To the Editor:

In a recent article in CHEST (January 2011), Fritscher and colleagues1 identified a group of patients with severe asthma who also had pulmonary infection with nontuberculous mycobacterial infection. They suggested that this be considered in older patients with more severe airflow obstruction who are on high doses of corticosteroids.

I have a cohort of 84 patients with severe asthma who require daily prednisone to control their eosinophilic bronchitis. The doses of corticosteroids are titrated to maintain sputum eosinophils <1%.2 If they have increased total cell count (TCC) and neutrophils (N) in their sputum, they are investigated according to a protocol that includes a detailed microbiologic survey.3 I have identified two patients with Mycobacterium avium complex (one man [FEV1, 72% predicted; sputum TCC, 52 × 10^6/g; N, 82%] and one woman [FEV1, 62% predicted; sputum TCC, 34 × 10^6/g; N, 84%]); one patient with Mycobacterium xenopi (woman; FEV1, 70% predicted; sputum TCC, 70 × 10^6/g; N, 90%); and one patient with Mycobacterium abscessus (woman, FEV1, 67% predicted; sputum TCC, 29 × 10^6/g; N, 92%).

All four patients had intense neutrophilic bronchitis that persisted after the eosinophilic bronchitis was controlled with an optimal dose of corticosteroids. One patient had mild bronchial wall thickening. There were no other causes of airway neutrophilia. The median time from presentation to diagnosis was 5 months. I suggest that, in addition to the clinical criteria suggested by Fritscher and colleagues, persistent sputum neutrophilia should alert physicians to examine for intracellular pathogens such as nontubercular mycobacteria in steroid-dependent asthmatic patients.

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REFERENCES


Response

To the Editor:

We thank Dr Nair for his observations, which complement our recent article in CHEST (January 2011).3 We share his concern that nontuberculous mycobacterial infection may complicate troublesome asthma more commonly than is currently recognized and further agree that asthma specialists should be alert to the symptoms and signs of this “difficult-to-treat” asthma variant. Whether these signs and symptoms should be limited to persistent cough, long-standing disease with remodeling, and characteristic radiologic changes or should also include sputum neutrophilia will require further study. Also, the value of detecting sputum neutrophilia as a means of heightening awareness of underlying infection may be insignificant, given the still-limited use of sputum cytology monitoring in asthma management.

It would be helpful to know if the four of 94 patients seen by Dr Nair with nontuberculous mycobacterial infection and asthma were the only four patients with sputum neutrophilia or whether they were part of a larger group of patients whose airway inflammation appeared neutrophilic after suppression of eosinophilia. We look forward to a more detailed description of these findings.

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