

Asthma phenotypes: do cough and wheeze predict exacerbations in persistent asthma?

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ABSTRACT

Little is known of the long-term symptom profile in uncontrolled asthma and whether symptoms can predict distinct phenotypes. The primary objective of these analyses was to assess diurnal profile of cough and wheeze in an uncontrolled asthma population. Secondary outcomes were to examine how these symptom profiles influence response to treatment.

Twice-daily electronically recorded data from 1701 patients were examined in relation to the population demographics. Reliever treatment with salbutamol was then compared with extra-fine beclometasone/ formoterol maintenance and reliever therapy (MART). Exacerbation frequency was then correlated with the symptom profile.

Symptoms were commoner in older patients with an increased body mass index. In most patients, reported cough and wheeze were closely correlated ($r=0.73$). Two phenotypes of cough- and wheeze predominant patients were identified; the former were overweight, older females and the latter older males. Diurnal symptoms of cough and wheeze were similarly attenuated by both therapies. MART reduced exacerbation frequency by a third compared with salbutamol, and this effect was greatest in patients with fewest reported symptoms.

While cough and wheeze are highly correlated in uncontrolled asthma, some patients predominantly have cough whereas others wheeze. Symptoms and exacerbation frequency appear poorly associated, suggesting an alternative pathophysiology. MART may be the preferred option in those with fewest symptoms.