

skin testing in defining MRGPRX2-mediated anaphylactic reactions.

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How bad is the SAD phenotype in relation to asthma control



To the Editor:

We read with interest the findings of Chiu et al¹ in symptomatic subjects with so-called preserved pulmonary function (PPF). This group of 255 individuals had a mean forced expiratory volume in 1 second (FEV1) of 100% predicted, forced expiratory flow at 25% to 75% of forced vital capacity (FEF25-75) of 82% predicted, and R5-R20 of 0.07 kPa/L/s. In 17% of PPF individuals who had small airways dysfunction (SAD) defined as FEF25-75 < 65% predicted, the mean FEV1 was 87% predicted, R5-R20 was 0.09 kPa/L/s, and FEF25-75 was 54% predicted.

In such patients using impulse oscillometry (IOS) either resonant frequency (Fres) or reactance area (AX) had the best predictive value for detecting SAD. Pointedly, their data did not include any measure of asthma control.

In this regard, we have previously reported on 442 patients with asthma in whom 302 (68%) had FEV1 > 80% indicative of PPF.² They had a mean FEV1 of 97% predicted and were taking a median inhaled corticosteroid dose of 800 µg/day with 42% taking long-acting β-agonists. In 55% of patients, SAD defined as R5-R20 > 0.07 kPa/L/s was associated with a 44% and 47% increased likelihood of oral corticosteroid or inhaled salbutamol use respectively over a 2-year period, whereas in 52% of patients with FEF25-75 < 70% predicted, there was a corresponding 33% and 48% increase. Abnormal values for both R5-R20 and FEF25-75 occurring in 28% of patients were associated with a 57% and 68% increased risk. Moreover, SAD including R5-R20 and AX is associated with worse asthma control and type 2 inflammation.³

We believe that these findings all reinforce the importance of comprehensively measuring SAD using a combination of impulse oscillometry and spirometry in order to inform rational management decisions and achieve optimal asthma control.

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