The small airways in obstructive lung diseases: too important to ignore

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There is good evidence that small airway abnormalities contribute to the pathophysiology of obstructive lung diseases. Patients with asthma and COPD have evidence of inflammation in the small airways [1,2], which can be measured by the degree of air-trapping using pulmonary function or CT scanning [3,4]. We are unsure about the exact prevalence of small airway dysfunction in patients with asthma, but studies suggest that this affects over half of the asthma population [5]. Importantly, the presence of small airway disease is associated with worse clinical outcomes in both asthma and COPD [6,7]. There are data from randomised clinical trials that show the benefits of using extra-fine particle inhalers to target the small airways with inhaled corticosteroids, both in terms of improving small airway function, and clinical endpoints [8,9]. Perhaps the strongest data for the role of the small airways comes from real-life studies, which have shown that patients treated with inhalers containing ICS in extra-fine particle formulations have better asthma control (Figure 1) [10,11]. The growing evidence of the prevalence and importance of the small airways in obstructive lung diseases means that therapeutic strategies to target small airway disease should be considered.

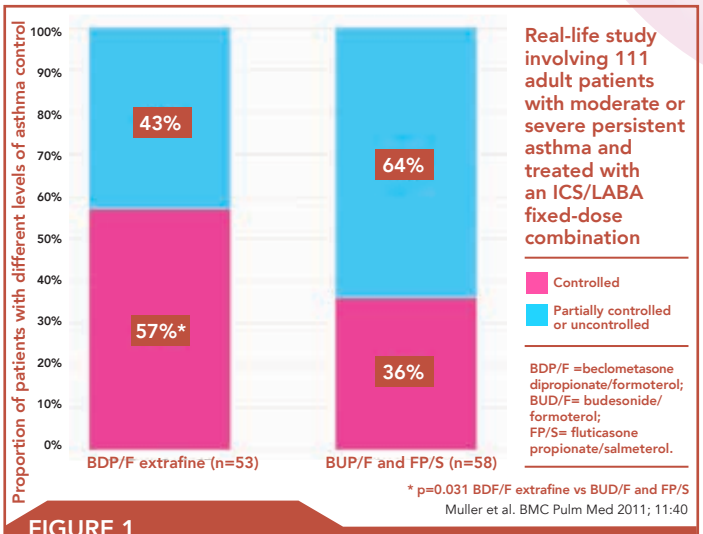

FIGURE 1
Extrafine BDP/F provides a greater percentage of patients with controlled asthma compared to larger particle formulations

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