Objective To evaluate the efficacy of BT for cough in severe uncontrolled asthma.

Methods Twelve patients with severe uncontrolled asthma were enrolled in this study between 2018 May and March 2021 and arbitrarily divided into cough-predominant [cough severity Visual Analog Scale (VAS) ≥ 40 mm, n = 8] and typical asthma (cough VAS < 40 mm, n = 4) groups. Clinical parameters, such as capsaicin cough sensitivity [C-CS: the concentrations to inhaled capsaicin required to induce at least two (C2) and five (C5) coughs], lung function, and type-2&epsilon;related biomarkers (fractional nitric oxides and absolute eosinophil counts) and cough-related indices [cough severity VAS and the Leicester Cough Questionnaire (LCQ)] were evaluated before and 3 months after performing BT.

Results BT significantly improved both cough-related indices and C-CS in the cough-predominant group (table 1). Changes in C-CS were significantly correlated with changes in the LCQ scores (C5: $r = 0.65$, $p = 0.02$ for all patients, and $r = 0.81$, $p = 0.01$ for the cough-predominant group). There was an association between changes in C-CS with BT and improvement of cough-specific QoL without the influence of confounder, such as regular use of biologics and/or OCS or more impaired cough-specific QoL at enrollment.

Conclusions BT may be effective for cough in severe asthma by improving C-CS.

Please refer to page A292 for declarations of interest related to this abstract.

P219 TARGETING THE IL-5 PATHWAY IMPROVES COUGH HYPERSENSITIVITY IN PATIENTS WITH SEVERE UNCONTROLLED ASTHMA

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Background Capsaicin cough sensitivity (C-CS) reflects airway neuronal dysfunction and may be a significant biomarker of asthma (Satia I, et al. J Allergy Clin Immunol. 2017). Although mepolizumab reduces cough in patients with severe uncontrolled asthma (Faruqi S, et al. Lung. 2020), it is unclear whether the cough reduction is associated with improved C-CS.

Objective We aimed to clarify the effect of biologics on C-CS and cough-specific quality of life (QoL) in patients with severe uncontrolled asthma using our previous study cohort.

Methods Overall, 52 consecutive patients who visited our hospital for severe uncontrolled asthma were included in the original study cohort, and 30 patients were eligible for this study. Changes in C-CS and cough-specific QoL were compared between patients treated with the anti-IL-5 pathway (n = 16) and those treated with other biologics (n = 14). C-CS was measured as the concentration of capsaicin required to induce at least five coughs (C5).

Results Biologics significantly improved C-CS (figure 1A, $P = 0.03$). Anti-IL-5 pathway therapies significantly improved C-CS, whereas other biologics did not (figure 1B,C, $P < 0.01$ and $P = 0.89$, respectively). C-CS improved significantly more in the anti-IL-5 pathway group than in the group treated with other biologics (figure 1B,C, changes in geometric mean C5, 3.4 [95% confidence interval, 1.5–7.6] for the anti-IL-5 pathway vs. 0.9 [95% confidence interval, 0.4–2.1] for other biologics; $P = 0.02$). Changes in C-CS significantly correlated with improvements in cough-specific QoL in the anti-IL-5 pathway group ($r = 0.58$, $P = 0.01$) but not in the group treated with other biologics ($r = 0.35$, $P = 0.22$).

Conclusion Anti-IL-5 pathway therapies improve C-CS and cough-specific QoL, and targeting the IL-5 pathway may be a therapeutic strategy for cough hypersensitivity in patients with severe uncontrolled asthma.

P220 THORACIC SOCIETIES MEMBER’S VIEW OF CHRONIC COUGH

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The current understanding of the disease of chronic cough by Society members is unknown. Between February and April 2023 a survey was conducted of the knowledge, therapeutic choices, and educational needs of the membership of the