EUROPEAN RESPIRATORY SOCIETY
INTERNATIONAL CONGRESS 2023
MILAN Italy, 9-13 September

Effect of add-on therapies (mepolizumab, omalizumab or azithromycin) on asthma remission in severe asthma

D. Thomas (Newcastle, Australia), V. Mcdonald (Newcastle, Australia), S. Stevens (Newcastle, Australia), E. Harvey (Newcastle, Australia), M. Baraket (Sydney, Australia), P. Bardin (Melbourne, Australia), J. Bowden (Adelaide, Australia), S. Bowler (Brisbane, Australia), J. Chien (Sydney, Australia), L. Chung (Perth, Australia), A. Gillman (Melbourne, Australia), M. Hew (Melbourne, Australia), S. Hodge (Adelaide, Australia), A. James (Perth, Australia), C. Jenkins (Sydney, Australia), C. Katelaris (Sydney, Australia), G. Katsoulotos (Sydney, Australia), D. Langton (Melbourne, Australia), J. Lee (Melbourne, Australia), G. Marks (Sydney, Australia), M. Peters (Sydney, Australia), N. Radhakrishna (Melbourne, Australia), P. Reynolds (Adelaide, Australia), J. Rimmer (Sydney, Australia), P. Sivakumaran (Gold Coast, Australia), J. Upham (Brisbane, Australia), P. Wark (Newcastle, Australia), I. Yang (Brisbane, Australia), P. Gibson (Newcastle, Australia)

Background: Asthma remission is a potential treatment goal.

Objective: To evaluate the efficacy of two biologics (mepolizumab/omalizumab) and azithromycin in achieving remission in severe asthma patients.

Methods: 788 patients (41% male; mean age 56.9±14.5 years) from three severe asthma datasets (the Australian Mepolizumab Registry [AMR], the Australian Xolair Registry [AXR], and the AMAZES RCT) were included in the analysis. Each dataset was analysed separately. Three definitions of remission were explored: 1) symptom remission (no exacerbations and no OCS use during the previous six months plus ACQ-5≤1 at 12 months; 2) clinical remission (symptom remission plus FEV1≥80% at 12 months); and 3) complete remission (clinical remission plus blood eosinophil count≤300 cells/microliter at 12 months). The predictors of clinical remission were identified using logistic-regression analysis.

Results: Among AMR patients, 29.3% achieved symptom remission and 8.9% achieved both clinical and complete remission. Among AXR patients, 22.8% achieved symptom and 5.2% achieved clinical remission. AMAZES patients had lower baseline disease severity, and 50.6%, 27.2% and 19.9% achieved symptom, clinical and complete remission, respectively. Better lung function, better asthma-related QoL and absence of OCS burst at baseline predicted the odds of achieving clinical remission.

Conclusion: Twelve months treatment with add-on therapies, mepolizumab, omalizumab or azithromycin, induced asthma remission in a subgroup of patients. Remission on treatment may be an achievable treatment target in severe asthma and future studies should consider remission as an outcome measure.