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Late Breaking Abstract - Two-year cumulative oral corticosteroid exposure in severe eosinophilic asthma before and after anti-IL-5 therapy

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Background

Prolonged use of oral corticosteroids (OCS) is associated with serious side effects. Anti-interleukin (IL)-5 biologics reduce maintenance dose and number of OCS bursts in severe eosinophilic asthma patients. However, little is known about OCS use over time and the effect of anti-IL-5 therapy on cumulative OCS exposure.

Aim

To compare the course and cumulative exposure to OCS in severe eosinophilic asthma patients 2 yr pre and post anti-IL-5 initiation.

Methods

Data from 389 patients who started anti-IL-5 biologics (mepolizumab, reslizumab, benralizumab) before January 2019 were obtained from the Dutch Severe Asthma Registry RAPSODI. Pharmacy dispensing data of OCS for 2 yr pre and post anti-IL-5 initiation were obtained from patients' pharmacies.

Results

Cumulative OCS exposure increased from median (IQR) 145 (0-517.62) to 450 (12.5-903.21) mg over 2 yr prior to anti-IL-5 initiation ($p < 0.001$). This increase was mainly observed in the 174 patients not yet using OCS at $t = -2$ yr. After initiation of anti-IL-5, median OCS exposure decreased by 72% within 6 months. Overall, cumulative OCS exposure decreased from median (IQR) 2715 (1150-5539) to 1050 (300-3640) mg over 2 yr pre and post anti-IL-5 initiation, resp. ($p < 0.001$). Of the patients with an OCS exposure < 1 yr before anti-IL-5 therapy, 75% were able to discontinue OCS vs 47% with an exposure of > 1 yr ($p < 0.001$).

Conclusion

OCS exposure increases markedly over 2 yr in patients with severe eosinophilic asthma. Overall, anti-IL-5 therapy reduces cumulative OCS exposure by about 60%. However, patients with shorter duration of OCS exposure are more likely to eliminate OCS, which argues for early anti-IL-5 intervention.