Respiratory Research day example abstract

NO MORE THAN 250 words

Example:

Elevated Sputum Interleukin-5 and Submucosal Eosinophilia in Obese Severe Asthmatics.

Desai D, Newby C, Symon FA, Haldar P, Shah S, Gupta S, Bafadhel M, Singapuri A, Siddiqui S, Woods J, Herath A, Anderson IK, Bradding P, Green R, Kulkarni N, Pavord I, Marshall RP, Sousa AR, May RD, Wardlaw AJ, Brightling CE.
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Abstract

Rationale: The relationship between airway inflammation and obesity in severe asthma is poorly understood.

Objectives: We sought to determine the relationship between sputum mediator profiles, the distribution of eosinophilic inflammation and obesity in severe asthmatics.

Methods: Clinical parameters and 8 mediators in sputum were assessed in 131 severe asthmatic subjects from a single centre categorised into lean, overweight and obese groups defined by their body mass index. In an independent group of severe asthmatics (n=45) and healthy controls (n=19) eosinophilic inflammation was enumerated in bronchial submucosa, blood and sputum and related to their body mass index. Measurements and Main

Results: Sputum interleukin (IL)-5 geometric mean [95% confidence interval] (pg/ml) was elevated in the obese (1.5 [1.0-2.3]) compared to overweight (0.9 [0.7-1.1]; p=0.02) and lean (0.7 [0.5-1.0]; p=0.01) asthmatics and was correlated with the body mass index (r=0.29, p<0.001). There was no relationship between body mass index, the sputum cell count or other sputum mediators. In the bronchoscopy group the submucosal eosinophil number in the asthmatic subjects was correlated with body mass index (Spearman's rank correlation rs=0.38, p=0.013) and the median (interquartile range) number of submucosal eosinophils was increased in obese (19.4 [11.8-31.2]) cells/mm2 versus lean subjects (8.2 [5.4-14.6]) (p=0.006). There was no significant association between sputum or peripheral blood eosinophil counts and body mass index.

Conclusion: Sputum IL-5 and submucosal eosinophils, but not sputum eosinophils are elevated in obese severe asthmatics. Whether specific anti-eosinophilic therapy is beneficial, or improved diet and lifestyle in obese asthma has anti-inflammatory effects beyond weight reduction, requires further study.