

Title

Clinical outcomes with mepolizumab therapy in routine practice in the Oxford cohort.

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Abstract

Introduction and Objectives: Mepolizumab is a new monoclonal antibody given to patients with severe eosinophilic asthma, it has been initiated in over 60 patients in our centre. The objective is to assess the efficacy of mepolizumab on type II biomarkers (blood eosinophil count, FeNO (fractional exhaled nitric oxide)), quality of life looking at five point asthma control questionnaire (ACQ5), visual analogue scales (VAS), the hospital anxiety and depression score (HADS), and the impact on prednisolone dose.

Methods: A longitudinal, prospective analysis of data from 50 patients receiving mepolizumab 100mg at month 0, month 1, month 4 and month 12 visits. Statistical significance was tested with Bonferroni-corrected paired t tests.

Results: We observed a statistically significant reduction in steroid dose and improvement in asthma symptoms (see Figure). There are further trends which show a reduction in anxiety, depression, cough and sputum production, although these are not statistically significant. There was a non-significant trend towards increased FeNO, which we postulate is a consequence of reduced oral steroid use. Whilst mepolizumab targets the IL-5 pathway, raised FeNO is strongly associated with the IL-13 pathway.

Conclusions: In our routine clinical practice mepolizumab therapy is associated with rapid and significant reduction in oral steroid use and improvements in symptoms, and trends in improved quality of life including reduced anxiety and depression. This confirms the positive impact that Mepolizumab can have on the lives of our patients.