Case series of long-term macrolide therapy effect on eosinophil count in COPD

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Introduction

Long term macrolide therapy is a treatment option in patients with COPD and frequent exacerbations but treatment response is heterogeneous. The modulation of inflammation by macrolides is not fully understood. Interestingly, an exceptional response to macrolide therapy in a patient with COPD at our centre, we noted that the peripheral blood eosinophil count (PBE) increased steadily while on macrolide therapy (Figure 1).

Methods

A note-case series review of the effect of long-term macrolide therapy on PBE levels in COPD patients was performed.

Results

During 2016, 16 COPD patients starting azithromycin were identified (10Male). The mean (range) age was 69years with a mean FEV₁ of 0.96L. At the onset of azithromycin, the mean PBE was 0.15 $\times 10^9$ /l whilst during treatment, the PBE increased to 0.20 $\times 10^9$ /L. There were 9 patients with an overall increase in PBE (mean change was 0.13 $\times 10^9$ /l) during therapy which was associated with a reduction in exacerbation frequency from 11/yr to 0.64/yr.

Conclusions

Long-term macrolide therapy may affect underlying inflammatory COPD phenotypes. Larger studies are required to further investigate this.