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**[ERS] Long-term effects of
inhaled corticosteroids on
sputum bacterial and viral
loads in COPD patients**

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Rationale

The use of inhaled corticosteroid (ICS) in COPD reduces the risk of exacerbations but it is associated with increased risk of pneumonia

Objectives

We compared the effects of 1-year treatment with either fluticasone propionate/salmeterol (SALM/FP) or salmeterol (SALM) alone on sputum bacterial and viral loads in moderate COPD patients

Methods



60 stable moderate COPD patients were recruited and randomized to receive either SALM/FP 50/500 mcg bid or SALM 50 mcg bid for 12 months. After baseline assessment, patients were seen every 3 months. At each visit lung function was assessed and induced sputum collected to evaluate the inflammatory cell profile and quantitative/qualitative bacteriology/virology

Results



After 1-year treatment, sputum total bacterial load significantly increased in the SALM/FP group (D +1.3 [-3 – 5] Log₁₀ CFU/ml, $p < 0.01$) but not in the SALM group (D0 [-5 – 4] Log₁₀ CFU/ml, $p > 0.05$). A non-significant increase of potentially pathogen bacterial load was observed in sputum samples of SALM/FP treated patients. No difference in respiratory virus detection rate was observed between the two arms. The increase in airway total bacterial load did not correlate with any of the clinical outcomes assessed during the study. Among SALM/FP treated patients, the increase in total bacterial load occurred in those subjects with no sputum eosinophil detection throughout the study ($p=ns$)



Conclusions

In moderate COPD patients ICS-treatment is associated with a significant increase in airway total bacterial load, not related to clinical outcomes, when eosinophils are persistently absent in sputum samples.

Muchas gracias
por su atención

