

Pseudomonas eradication management in COPD: results from a single centre

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Introduction: In patients with COPD, pseudomonas aeruginosa (PsA) airway infection is associated with disease severity. Management of PsA first isolate, from the non-CF bronchiectasis literature includes aggressive eradication treatment with IV antibiotics or high dose ciprofloxacin. The clinical effect of PsA eradication in patients with COPD is unknown. We investigated, for 1st isolate of PsA, the clinical outcomes in COPD patients following attempts at PsA eradication.

Methods: All patients with a PsA isolated from 2011 to 2016 were identified. Patients with CF and non-CF bronchiectasis were excluded. Patients with a co-diagnosis of COPD and non-CF bronchiectasis were also excluded. Clinical data and outcomes following PsA eradication were collected.

Results: Following exclusion, available data from 23 patients (16 men) with a mean (range) age of 70years (42-90). Following 1st isolate of PsA, 58% received high dose oral ciprofloxacin, 29% received Intravenous antibiotics and 13% received no treatment. After initial treatment 54% went on to re-culture pseudomonas and further long-term treatment of nebulised antibiotics or prolonged ciprofloxacin was given to 53% of these. Despite second line treatment all the patients who re-cultured pseudomonas went on to have PsA colonisation. Although not statistically significant, severe exacerbations, requiring hospitalisation, were more common in patients who went on to colonise PsA than those that eradicated (mean difference 1.0, 95%CI -1.2 to 3.2, p=0.34).

Conclusion: Attempts at eradicating pseudomonas airway infection is successful in approximately 50% of patients with COPD and may have an impact on reducing severe hospitalisations.