USING SALIVARY PEPsin AND THE REFLUX SYMPTOM INDEX AS OBJECTIVES MARKERS OF GASTRO-OESOPHAGEAL REFLUX TO PREDICT EXACERBATIONS OF COPD

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Introduction

Self-reported gastro-oesophageal reflux disease (GORD) and associated laryngopharyngeal reflux (LPR) are common co-morbidities in patients with COPD and associated with an increased risk of exacerbations. However, history of GORD or LPR are not routinely collected in these patients. Furthermore, silent reflux may predispose patients to exacerbations despite being asymptomatic.

We aimed to determine the prevalence of objectively assessed measures of GORD and LPR, using salivary pepsin (a non-invasive biomarker of GORD, including silent disease) and the Reflux Symptom Index (RSI) respectively, and whether these were associated with exacerbations of COPD.
Introduction COPD exacerbations impose a major burden on patients and the NHS. They are often treated empirically with antibiotics and steroids, despite a large proportion being viral induced or non-infective.

We hypothesised that incorporation of R-POCTc within our integrated hospital at home service would improve quality of patient care by ensuring delivery of a more personalised management plan whereby treatment was guided by clinical testing.

Objectives To investigate whether Home R-POCTc for COPD facilitated:
1. Reduced antibiotic prescribing
2. Avoidance of hospital admission and ED attendance
3. Improved patient experience and quality of life (QOL).

Methods 42 patients underwent R-POCTc: CRP, procalcitonin (PCT) (Finecare) and a panel of 12 respiratory viruses and 4 atypical bacteria(BioFire Film Array, Biomerieux Inc.) were tested using samples taken by nurses in patients’ homes and then analyzed by them in a community hub.

Outcomes in this patient cohort were compared before and after the implementation of R-POCTc. Patient reported experience measures (PREMs), health anxiety and QOL questionnaires were collected longitudinally.

Results Patients were COPD Gold stage C/D, MRC 3, mean FEV1 less than 50% with a mean of 4 exacerbations and 1 hospitalisation in the last year.

1. RPOCTc allowed antibiotics to be withheld in 32 patients who would have received this treatment at their previous exacerbation (figure 1a).
2. A significantly larger number of patients avoided hospital admission (figure 1b).
3. COPD assessment tool (CAT) scores showed that quality of life was significantly higher in the same group of patients after service implementation (mean difference -2.2, p=0.002).

Conclusion
- R-POCTc improves quality of care in severe COPD by delivering a safe, personalised approach, enhancing the patient experience and journey, by home testing and by reducing risks of inappropriate antibiotic prescribing, thereby improving antimicrobial stewardship.
- QOL was objectively better using R-POCTc. Patients found the support and care provided at home (without recourse to hospital admission) enhanced recovery from the exacerbation.
- Personalised decision-making gave reassurance to patients and staff.
- Patient involvement provided empowerment, education and understanding about their condition. This should help address the frequently high levels of anxiety within this group, which can precipitate exacerbations.

REFERENCE