

dilutional effect of the bronchial wash procedure and extrapolating to allow comparison with sputum data in our laboratory for CF and BE, the relative load of bacteria from the genera *Streptococcus*, *Prevotella* and *Veillonella* is similar in these three airway diseases. The potential role of these bacteria in the progression and pathogenesis of COPD requires further investigation.

S105 LONGITUDINAL MICROBIOLOGY OF ADULT NON-CF BRONCHIECTASIS

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Introduction and Objectives A longitudinal microbiologic profile in adults with non-CF bronchiectasis (nCF-Br) is helpful in directing appropriate antibiotic therapy and may also have implications for prognosis. Information in this area is scarce with limited published data and small sample sizes of available studies. We have looked at longitudinal records from a group of nCF-Br patients attending a specialist clinic.

Methods All available sputum microbiology results for patients over a 5-year period were analysed.

Results 158 patients, average age 64.5 years (range 18–87 years), 58M:100F, had 2 or more samples available for analysis. The majority (149 (94.3%)) of these had a HRCT diagnosis. 23 (14.6%) of the 158 patients cultured no organisms. Abstract S105 table 1 shows the distribution of organisms found colonising the remaining 141 patients. In a subset of 72 patients with =6 samples taken over an average period of 2.7 (SD 1.0) years, 2 (2.8%) grew no organisms, 17 (23.6%) grew a single organism, 21 (29.2%) grew two, 14 (19.4%) grew three, 18 (25%) grew four or more different organisms on different occasions. Of the 806 samples analysed in this subset of patients, the majority grew single organisms, 83 (10.3%) reported 2 or more isolates. Among 46 of these 72 in whom *Pseudomonas* spp. was isolated, the initial isolate was followed by persistent colonisation in 30 (65.2%).

Conclusions The distribution of colonising pathogens among our larger patient group is similar to those found in other studies. We have shown a higher degree of variation in organisms found over time than has been previously shown.¹

Abstract S105 Table 1 Distribution of organism colonisation in patients with non-CF bronchiectasis

| Organism | Colonisation rate n (%) |
|---|-------------------------|
| <i>Pseudomonas aeruginosa</i> | 42 (26.6) |
| <i>Haemophilus influenzae</i> | 22 (13.9) |
| Coliforms (including <i>Klebsiella</i> spp., <i>Serratia</i> spp., <i>Proteus</i> spp., <i>Escherichia coli</i> and <i>Enterobacter cloacae</i>) | 14 (8.9) |
| <i>Streptococcus pneumoniae</i> | 11 (7.0) |
| <i>Aspergillus</i> spp. | 8 (5.1) |
| <i>Moraxella catarrhalis</i> | 6 (3.8) |
| <i>Staphylococcus aureus</i> | 3 (1.9) |
| MRSA | 2 (1.3) |
| Others | 2 (1.3) |
| No pathogens isolated | 23 (14.6) |

REFERENCE

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S106 A RANDOMISED DOUBLE BLIND 13 WEEK CROSSOVER TRIAL OF HYPERTONIC SALINE (HTS) (6%) VS ISOTONIC SALINE (ITS) (0.9%) IN PATIENTS WITH BRONCHIECTASIS

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Background Hypertonic saline is a hyperosmolar agent which increases mucociliary clearance in CF but there is little data available on its effectiveness in bronchiectasis.

Aim To determine the effectiveness of nebulised HTS (6%) in comparison to ITS (0.9%) on 24 h sputum production, lung function and patient related outcome measures in patients with stable bronchiectasis.

Design Proof of concept double blind cross-over study.

Methods Patients with clinical and CT diagnosis of bronchiectasis were randomised (double—blinded) to receive two consecutive 4-week treatments of twice daily nebulised HTS (6%) or ITS (0.9%) each masked with quinine sulphate; with a 2-week washout period between treatment cycles. The order of treatment was determined using concealed computerised randomised allocation performed by a statistician not involved in study conduct (EG).

Outcomes 24 h sputum volume/weight, lung function (FEV₁), cough (Leicester Cough Questionnaire, LCQ) and quality of life (Quality of Life Questionnaire-Bronchiectasis, QOL-B), and adverse events.

Results 19 patients (9M: 10F; Mean (SD): 61 (11) yrs; FEV₁, 57 (23) % predicted; daily sputum weight 17 (17) grams) were recruited into this study. 13 patients completed both arms of the study. A patient and co-ordinator questionnaire indicated that the study design and the use of quinine sulphate was successful in achieving double blinding and masking HTS/ITS. HTS had a small to large effect (effect sizes 0.01–0.14) on sputum and FEV₁, LCQ, and QOL-B. The overall trend was a benefit from HTS compared to ITS. There was a significant improvement in the physical domain of the LCQ (−0.8 (0.9), p=0.01) and the respiratory symptoms domain of the QOL-B (−11.6 (17.7), p=0.03) in the HTS cycle compared to the ITS. There was no differences in adverse events between the cycles.

Conclusion This study suggests that HTS may be effective in bronchiectasis. It provides data on study feasibility (study design and sample size) to justify a Phase 3 multicentre clinical trial to investigate the effectiveness of HTS in bronchiectasis.

S107 THE INFLUENCE OF VIRAL SYMPTOMS IN INFECTIVE EXACERBATIONS OF NON-CYSTIC FIBROSIS BRONCHIECTASIS

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Aim The aim of this study was to determine whether presence of viral symptoms influenced severity or outcome of exacerbations of bronchiectasis.

Methods Patients presenting to our outpatient service with exacerbations of bronchiectasis (defined as increasing cough, increasing sputum volume and worsening sputum purulence) requiring 2 weeks' oral antibiotic therapy were included. Patients reporting viral symptoms (defined as fever and any two of: unusual tiredness, headache, rhinorrhoea, sore throat, anorexia, myalgia, diarrhoea or vomiting) were compared with those who did not. The following outcomes were used to assess the exacerbation and response to 2 weeks' antibiotic therapy between the two groups: sputum