

38% and other organisms 29% of patients. Median (IQR) 24-hour, day time and night time cough counts were: 249 (112, 438), 240 (109, 404.5) and 24 (5, 56.5) coughs respectively. There was diurnal variation in cough frequency (Figure 1). Day time cough frequency was significantly greater than night time (Wilcoxon signed rank test  $p < 0.01$ ). 24-hour total coughs were significantly associated with HRQOL (Spearman  $\rho = -0.54$ ,  $p < 0.01$ ), cough VAS ( $\rho = 0.56$ ,  $p < 0.01$ ) and sputum VAS ( $\rho = 0.48$ ,  $p < 0.01$ ). There was an association between 24-hour cough counts and gender (linear regression  $p = 0.05$ ), but no association with bronchiectasis aetiology, sputum colonisation status or age.

**Conclusions** Cough frequency monitoring in patients with bronchiectasis is feasible. Higher cough frequency was associated with poorer HRQOL and worse patient-reported symptoms of cough and sputum. Patients coughed more during the day than at night. 24-hour cough frequency was variable and gender was identified as an influential factor. Future studies should investigate other potential factors for cough variability in bronchiectasis and evaluate the potential of cough frequency as an outcome measure for assessing the efficacy of therapy.

**P9** **COUGH IS PREVALENT IN HIGHER PROPORTION OF OLDER PATIENTS WITH BOTH IDIOPATHIC PULMONARY FIBROSIS AND NON-SPECIFIC INTERSTITIAL LUNG DISEASE**

<sup>1</sup>G Saini, <sup>1</sup>T McKeever, <sup>1</sup>R Braybrooke, <sup>1</sup>R Hubbard, <sup>1</sup>G Jenkins, <sup>2</sup>RM Marshall, <sup>2</sup>PL Lukey, <sup>2</sup>JS Simpson. <sup>1</sup>University of Nottingham, Nottingham, U. K; <sup>2</sup>Fibrosis DPU, GSK, Newcastle, UK

10.1136/thoraxjnl-2014-206260.159

**Introduction** Cough is a major symptom of Idiopathic Pulmonary fibrosis (IPF), a progressive, fatal lung disease with median survival of 3 years. The first study to suggest cough as an independent predictor of disease progression, reported it in 84% of the population.<sup>1</sup> The only study to quantify cough in 19 IPF patients, reported strong correlation between objective cough counts and cough related quality of life<sup>2</sup> There is a lack of studies investigating the prevalence, pathogenesis or treatment of cough in IPF. We set up a study to evaluate the prevalence of cough in an incident IPF and Non specific Interstitial Pneumonia (NSIP) population.

**Methods** A prospective, multi-centre, observational, cohort study, PROFILE-Central England (September 2009 to June 2014) was set up. Patients had a diagnosis of definite or probable IPF or NSIP based on the ATS consensus. Leicester cough questionnaire (LCQ) was used to assess presence or absence of cough at baseline. Furthermore, the cohort was divided into 3 groups to assess severity of cough: Mild (17–20), Moderate (11–16.9) and Severe (<11).

**Results** 312 incident patients with IPF or NSIP were enrolled. 261/312(83.6%) patients had incident IPF whilst 51/312(16.4%) had NSIP. The mean age of the cohort was 73.5 years (35–90 years). 235/312(76%) were males with mean age 73.7 years (47–90 years); 74/312(24%) were females with mean age of 72.9 years (35.8–88.8 years).

261/312(83.6%) reported cough compared with 51/312 (16.4%) who reported no cough. Of the patients who reported cough, 45/261(17.2%) had severe cough, 112/261(42.9%) had moderate cough and 104/261(39.8%) had mild cough. There was no effect of gender, however, older cohort reported more cough (age >55 years;  $p = 0.014$ ). Smoking may be a confounder, however the number of current smokers in the cohort is too small ( $p = 0.05$ ).

Interestingly both NSIP and IPF cohort reported cough; however, proportionally NSIP patients have less cough (14/51,27.4%) compared with IPF (37/261, 14%).

**Conclusions** Cough occurs in a huge majority of patients with both IPF and NSIP. Cough appears to be a greater problem in older patients.

**REFERENCES**

- 1 Ryerson CJ *et al.* Cough predicts prognosis in idiopathic pulmonary fibrosis. *Respirology*. 2011 Aug;16(6):969–75
- 2 Key AL *et al.* Objective cough frequency in Idiopathic Pulmonary Fibrosis. *Cough*. 2010;6:4

**P10** **THE EFFECT OF NALTREXONE, AN OPIOID RECEPTOR ANTAGONIST, ON CAPSAICIN EVOKED COUGH, IN HEALTHY MALE SUBJECTS**

I Satia, K Holt, E Hilton, AA Woodcock, J Smith. Centre for Respiratory and Allergy Research, University of Manchester, Manchester, UK

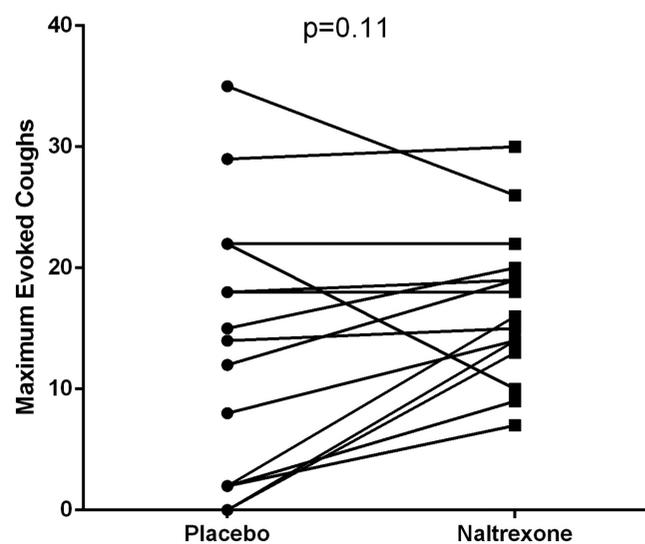
10.1136/thoraxjnl-2014-206260.160

**Introduction** Chronic cough is a troublesome condition that reduces patient quality of life. Recent evidence suggests that healthy females cough more than healthy males but the mechanism underlying this is unclear.<sup>1</sup> We hypothesise that opiate-sensitive inhibitory control mechanisms determine capsaicin-evoked cough responses in healthy subjects.

**Aim** To show that in healthy males the number of capsaicin-evoked coughs is increased following administration of naltrexone, an opiate receptor antagonist, compared with placebo.

**Method** 15 male subjects (median age 30 yrs (21–59)) were recruited in to a randomised double blind cross-over trial of single doses of naltrexone vs. placebo given 1 week apart. A capsaicin inhalational challenge (doubling doses 0.48 to 125[micro]M) was performed 60 min after ingestion of naltrexone/placebo using a dosimeter. Four inhalations 30 seconds apart were performed at each concentration and the total coughs evoked at each dose were recorded and verified using a cough monitor.

**Results** There was a tendency for subjects to cough more when treated with naltrexone ( $16.7 \pm 2.7$  (SEM) compared with placebo ( $13.7 \pm 1.6$ ), ( $p = 0.11$ , general estimating equations). See Figure 1



Abstract P10 Figure 1