Conclusion There was no evidence of an anti-tussive effect of GSK2339345 over the 8 h analysis for any subject, despite cough frequency being highly reproducible within patients. Inhalation of GSK2339345 had a pro-tussive effect in all subjects following actuation of the device, not seen with placebo. The novel cough challenge methodology warrants further investigation as a development tool.

P239 LOW PREVALENCE OF EXTRA-THORACIC AIRWAY HYPER-RESPONSIVENESS IN UK PATIENTS WITH CHRONIC REFRACTORY COUGH

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10.1136/thoraxjnl-2015-207770.375

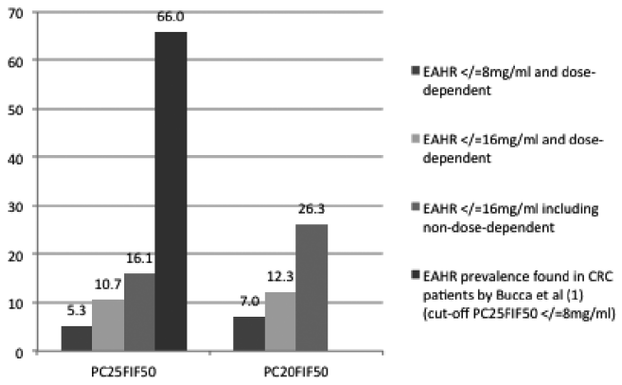
Introduction Prior research indicates that chronic refractory cough (CRC) is associated with a high prevalence of extra-thoracic airway hyper-responsiveness (EAHR).[1] This heightened laryngoconstrictor reflex can be characterised using standard bronchoprovocation tests (e.g. histamine or hypertonic saline); whereby attenuation in the inspiratory component of the flow-volume curve is evaluated in response to escalating doses of the stimulus.

Aims and objectives To determine the prevalence of EAHR in a cohort of CRC patients in the UK undergoing cough assessment, and to relate EAHR to other disease characteristics.

Methods Data was retrospectively evaluated for all CRC patients completing cough assessment with histamine bronchoprovocation challenge, between 2013 and 2015. EAHR was defined by a 25% dose-responsive fall in the mid-inspiratory flow (PC25FIF50) in response to ≤ 8 mg/ml histamine.[2] EAHR data was compared with other simultaneous investigation results, including overnight pH/impedance results and co-existing nasal disease.

Results We studied 57 adult CRC patients (n = 42, female; 74%), mean ±SD age 54.6 ± 12.4 years, BMI 28.2 ± 5.9 kg/m^2, reporting a duration of cough 5.5 years (0.8–50) with a median cough VAS score of 57 (16–90). The majority of patients (56%) reported cough without other respiratory symptoms, whereas 12 (21%) reported cough with dyspnoea and wheeze. Evidence of EAHR was found in three patients (5.3%). At a reduced cut-off (PC20FIF50 ≤ 16 mg/ml) the prevalence of EAHR was greater (12%) (Figure 1). Patients with a positive EAHR test at this cut-off were younger ($p < 0.01$, mean age 44 yrs versus 56 yrs) and more likely to report respiratory dyspnoea and wheeze ($p < 0.05$). In patients completing an overnight reflux study (n = 52), 32 (62%) had evidence of reflux. 21 (37%) patients had co-existing nasal disease. However, presence of reflux or nasal disease was not predictive of EAHR (both $p > 0.05$).

Conclusion EAHR was not prevalent in CRC patients, completing assessment at a specialist cough service, when using a standard histamine bronchoprovocation test. Differences from prior published data may be explained by methodological differences, specifically the application of stringent control of the measures of reproducibility of inspiratory flow parameters and dose response criteria.



Abstract P239 Figure 1

REFERENCES

1 Bucca C, Rolla G, Scappaticci E, *et al*. Histamine hyperresponsiveness of the extrathoracic airway in patients with asthmatic symptoms. *Allergy* 1991;**46**: 147–53
2 Bucca C, Bugiani M, Culla B, *et al*. Chronic cough and irritable larynx. *J Allergy Clin Immunol*. 2011;**127**:412–9

P240 VALIDATION OF THE LEICESTER COUGH QUESTIONNAIRE IN PULMONARY TUBERCULOSIS

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10.1136/thoraxjnl-2015-207770.376

Introduction and objective Cough is prominent in pulmonary tuberculosis (TB) and transmits infection, yet no tool has been validated for assessing cough symptoms. We evaluated the Leicester Cough Questionnaire (LCQ) for measuring cough-related quality of life (QOL) in TB.

Method The face validity of the LCQ was evaluated by structured interviews with patients and a multi-disciplinary team (MDT) discussion (respiratory physicians and nurses). Consecutive patients with TB completed the LCQ just before or within 7 days of starting therapy; a subgroup completed a repeat questionnaire approximately two weeks after the first. Internal reliability (inter-relatedness between items), concurrent validity (association with cough severity visual analogue scale [VAS] score and 24-hour cough frequency measured with the Leicester Cough Monitor), and responsiveness were evaluated.

Results The MDT and patients thought the LCQ to be relevant, comprehensive and useful in TB and no modifications were suggested. Forty patients completed the questionnaire before (n = 29) or just after (n = 11) the start of treatment. Internal reliability of responses was high (Cronbach's $\alpha = 0.93$). LCQ scores were correlated with both the VAS (Spearman's $\rho = -0.69$ [95% confidence intervaI -0.83 to -0.46], $p < 0.0001$) and 24-hour cough frequency ($\rho = -0.36$ [-0.62 to -0.04], $p = 0.023$), and were worse pre-treatment in culture-positive compared to culture-negative disease (median 12.4 [IQR 8.5–17.4] *vs* 18.7 [17.8–19.6] respectively, $p = 0.052$). There was no evidence of association with other markers of disease severity (sputum smear positivity, lung cavities and radiographic extent of disease), but a trend towards worse LCQ scores amongst current smokers than non-smokers (12.6 [8.3–14.4] *vs* 17.1 [11.1–21.0] respectively, $p = 0.075$).