

# A study to accurately define reflux in patients with chronic cough

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		<input type="checkbox"/> Protocol
<b>Registration date</b> 13/09/2010	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan
		<input checked="" type="checkbox"/> Results
<b>Last Edited</b> 11/07/2013	<b>Condition category</b> Signs and Symptoms	<input type="checkbox"/> Individual participant data

**Plain English summary of protocol**  
Not provided at time of registration

## Contact information

**Type(s)**  
Scientific

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## Additional identifiers

**Protocol serial number**  
2005TM011 (R&D)

## Study information

**Scientific Title**  
A study to accurately define gastro-oesophageal reflux disease in patients with chronic cough:  
An observational, cross-sectional cohort study

## Acronym

SD/AK GORD

## Study objectives

We hypothesise that both acid and non acid reflux events cause chronic cough in patients with chronic cough. This hypothesis would explain why acid suppressing treatments are only successful in half of patients with proven acid reflux.

To date no investigators have used all available techniques to define reflux events in patients with chronic cough as acid/non-acid, proximal/distal. The proximity of the reflux (larynx/pharynx or distal oesophagus) may be important.

## Further reading:

1. S. Decalmer, D. Webster, A. Kelsall, K McGuinness, A. Woodcock, J.A. Smith. Chronic Cough: How Do Cough Reflex Sensitivity And Subjective Assessments Correlate With Objective Cough Counts During Ambulatory Monitoring? *Thorax* 2007;62:329-334
2. R Stovold, I.A Forrest., P.A. Corris, D.M. Murphy, J.A. Smith, S Decalmer, G.E. Johnson, J.H. Dark, J.P. Pearson, C Ward. Pepsin, a Biomarker of Aspiration in Lung Allografts: A Putative Association with Rejection. *Am. J. Respir. Crit. Care Med.* 2007; 175(12): 1298-1303
3. S Decalmer, A. Woodcock, J.A. Smith. Patient mis-reporting may lead to underestimation of cough events. [letter] *Chest.* 2007 Jul;132(1):358-9
4. S. Decalmer, A. Woodcock, M. Greaves, M. Howe and J.A. Smith. Airway abnormalities at flexible bronchoscopy in patients with chronic cough. *Eur.Respir.J* 2007; 30(6):1138-42
5. A. Kelsall, S. Decalmer, D. Webster, N. Brown, K. McGuinness, A. Woodcock and J.A.Smith. How to quantify cough? Correlations with quality of life in chronic cough. *Eur.Respir.J* 2008; 32:1-5
6. A Kelsall, S Decalmer, K McGuinness, A Woodcock, JA Smith. Sex differences and predictors of objective cough frequency in chronic cough. *Thorax.* 2009; 64(5):393-8.

## Ethics approval required

Old ethics approval format

## Ethics approval(s)

The South Manchester Research Ethics Committee approved on 15/06/2005 (ref: 05/Q1403/117)

## Study design

Single centre observational cross sectional cohort study running over 3 years.

## Primary study design

Observational

## Study type(s)

Diagnostic

## Health condition(s) or problem(s) studied

Chronic cough and gastro-oesophageal reflux disease.

## Interventions

The subject will attend 5 visits, as described below:

### Visit 1: Lung Function

1.1. Symptom questionnaires (Subjective cough scores, cough quality of life, reflux symptom

scores and quality of life)

- 1.2. History and Physical examination
- 1.3. Exhaled nitric oxide measurement
- 1.4. Exhaled breath condensate collection
- 1.5. Lung Function and exhaled CO testing (<5 ppm to exclude smoking)
- 1.6. Methacholine Challenge
- 1.7. Cough challenge test (Single breath, doubling dose method)
- 1.8. Sputum Induction
- 1.9. Venepuncture for IgG levels and Tissue Transglutaminase
- 1.10. 24 hour cough monitoring

Visit 2: ENT examination

- 2.1. Laryngeal appearance scores
- 2.2. Exclusion of significant nasal disease, laryngeal lesion

Visit 3: Bronchoscopy

- 3.1. Examination of airways and biopsy
- 3.2. Bronchoalveolar lavage for pepsin/ pepsinogen and differential cell count

Visit 4: O.G.D

- 4.1. Examination of the upper G.I tract for evidence of oesophagitis, Barretts oesophagitis, hiatus hernia and eosinophilic oesophagitis.
- 4.2. Biopsy of the lower oesophageal mucosa.

Visit 5: Oesophageal studies and Cough Monitoring

- 5.1. Oesophageal Manometry (measure of motility)
- 5.2. 24hour combined pH and impedance monitoring (pH/MII)
- 5.3. Simultaneous 24hr objective cough monitoring

### **Intervention Type**

Other

### **Phase**

Not Applicable

### **Primary outcome(s)**

Allocation of patient to one of 3 classifications using results from the above procedures:

1. Negative group (no evidence of reflux disease as determined by oesophageal studies)
2. Distal Reflux acid/non-acid as determined by oesophageal studies
3. Proximal Reflux acid/non-acid as determined by oesophageal studies

### **Key secondary outcome(s)**

1. Evidence of aspiration in three groups as determined by study of bronchoscopy samples
2. Evidence of dysmotility in three groups
3. Severity association between cough and reflux events as determined by cough monitoring and questionnaires
4. Comparison of acid and non-acid reflux
5. Comparison of cough rates with and without the oesophageal

### **Completion date**

31/07/2008

# Eligibility

## Key inclusion criteria

1. Males and Females over 18 yrs of age
2. Chronic dry cough for more than 8 weeks duration
3. Normal chest x-ray
4. Normal lung function

## Participant type(s)

Patient

## Healthy volunteers allowed

No

## Age group

Adult

## Lower age limit

18 years

## Sex

All

## Key exclusion criteria

1. Upper Respiratory Tract Infection within last 4 weeks
2. Current smokers
3. Pregnancy
4. Opiate medication / ACE Inhibitor use
5. Diabetes Mellitus

## Date of first enrolment

01/07/2005

## Date of final enrolment

31/07/2008

# Locations

## Countries of recruitment

United Kingdom

England

## Study participating centre

School of Translational Medicine

Manchester

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# Sponsor information

## Organisation

University Hospital of South Manchester (UK)

## ROR

<https://ror.org/00he80998>

# Funder(s)

## Funder type

Charity

## Funder Name

Moulton Charitable Trust (UK)

# Results and Publications

## Individual participant data (IPD) sharing plan

## IPD sharing plan summary

Not provided at time of registration

## Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Results article</a>	results	01/03/2011		Yes	No
<a href="#">Results article</a>	results	01/10/2012		Yes	No