

A study to accurately define reflux in patients with chronic cough

Submission date 23/08/2010	Recruitment status No longer recruiting	☐ Prospectively registered ☐ Protocol
Registration date 13/09/2010	Overall study status Completed	☐ Statistical analysis plan ☒ Results
Last Edited 11/07/2013	Condition category Signs and Symptoms	☐ 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)

Primary study design

Observational

Study design

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

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

United Kingdom

M23 9LT

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?
Results article	results	01/03/2011		Yes	No
Results article	results	01/10/2012		Yes	No