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A study to accurately define reflux in patients with chronic cough

Submission date	Recruitment status	[_] Prospectively registered
23/08/2010	No longer recruiting	[_] Protocol
Registration date	**Overall study status**	[_] Statistical analysis plan
13/09/2010	Completed	[X] Results
Last Edited	**Condition category**	[_] Individual participant data
11/07/2013	Signs and Symptoms	

Plain English summary of protocol
Not provided at time of registration

Contact information

Type(s)
Scientific

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Additional identifiers

EudraCT/CTIS number

IRAS number

ClinicalTrials.gov number

Secondary identifying numbers
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 McGuiness, 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

Secondary study design
Cross-section survey

Study setting(s)

Hospital

Study type(s)
Diagnostic

Participant information sheet
Not available in web format, please use contact details below to request a patient information sheet

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 measure
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

Secondary outcome measures
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

Overall study start date
01/07/2005

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

Age group
Adult

Lower age limit
18 Years

Sex
Both

Target number of participants
100

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
England

United Kingdom

Study participating centre
School of Translational Medicine
Manchester
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Sponsor information

Organisation
University Hospital of South Manchester (UK)

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Sponsor type
Hospital/treatment centre

ROR
https://ror.org/00he80998

Funder(s)

Funder type

Charity

Funder Name
Moulton Charitable Trust (UK)

Results and Publications

Publication and dissemination plan
Not provided at time of registration

Intention to publish date

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