







# Description of cough headache in a cough unit

<b>Submission date</b> 07/02/2019	<b>Recruitment status</b> No longer recruiting	 Prospectively registered
<b>Registration date</b> 08/02/2019	<b>Overall study status</b> Completed	 Protocol added
<b>Last Edited</b> 11/05/2020	<b>Condition category</b> Signs and Symptoms	 SAP not yet added
		 Results not yet added and study completed for more than 1 year
		 Raw data not yet added
		 Study completed

## Plain English Summary

### Background and study aims

Cough headache is a very rare headache type that accounts for less than 1% of the diagnoses in specialised headache centres. By targeting a population from a cough clinic, this study aims to provide a better evidence on what the headache characteristics and other associated features are.

### Who can participate?

Patients aged 18-80 with cough headache

### What does the study involve?

The study consists of one visit. Participants go through a semi-structured interview in which general medical history and features of headache are assessed. A neurological examination is performed as well as modified Valsalva Test.

### What are the possible benefits and risks of participating?

If the study were to find a likely diagnosis of cough headache, specific and more directed treatment could be recommended to the patient's GP if this has not been the case to date. The modified Valsalva test may cause or worsen headache for a brief period of time. Potentially, if performed in cough headache patients it could cause a similar headache to the one they would get when they cough, and it would presumably resolve within minutes. There are no other known risks of participating on this trial.

### Where is the study run from?

King's College Hospital (UK)

### When is the study starting and how long is it expected to run for?

February 2019 to February 2020

Who is funding the study?  
National Institute for Health Research (NIHR) (UK)

Who is the main contact?  
Dr David Moreno Ajona  
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## Contact information

**Type(s)**  
Public

**Contact name**  
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## Additional identifiers

**EudraCT/CTIS number**

**IRAS number**

**ClinicalTrials.gov number**

**Protocol/serial number**  
KCH19-021

## Study information

**Scientific Title**  
Description of primary cough headache in a cough unit: a prospective study

**Acronym**  
PCH-CU

**Study hypothesis**  
According to the current available data, primary cough headache (PCH) occurs mainly in subjects over the age of 40 years, being the mean age of onset 67 years. A male predominance has been pointed, although the male/female ratio changes dramatically among series. Furthermore, it seems to be an episodic disease as it normally lasts less than 2 years. Pain is usually localized

bilaterally, with a major involvement of the occipital region. Pain quality, however, has been described as sharp, stabbing, splitting, explosive, electrical, pressing, dull or even pulsatile. Precipitants may include coughing, sneezing, nose blowing, laughing, crying, singing, lifting a weight, straining at stool, and stooping. Nevertheless, they should not include sustained physical exercise which would be typical of exertional headache. Regarding the headache associated features, nausea, dizziness and photo/photophobia have been documented in a very little proportion of patients, being these, vertigo, ataxia and syncope, red flags indicating a probable secondary origin.

In this context, differential diagnosis with secondary or symptomatic cough headache is crucial. The most common reported cause is Chiari type 1 malformation, although any posterior fossa lesion could cause the symptoms as well as syringomyelia, platybasia, obstructive hydrocephalus, subdural hematoma, sphenoid sinusitis, spontaneous intracranial hypotension, brain aneurysm and even carotid artery disease. Overall, it is considered that almost 50% of cough headaches are symptomatic. However, the only published study in cough patients found 3 /32 (9%) secondary headaches (all of them due to Arnold Chiari malformation).

A 16-patient study showed that a modified Valsalva manoeuvre (exhalation into the spigot of an aneroid sphygmomanometer to a pressure of 60 mm Hg and maintain this for 10 seconds) was capable of distinguishing primary from secondary headache. According to this result, the authors hypothesized that a transient increase in intracranial pressure during exertion due to obstruction to normal CSF dynamics should explain secondary Cough headache. Conversely, they stated PCH could be caused through congestion of the orbital venous plexus in the presence of jugular venous incompetence and a reduced threshold for trigeminal sensory activation. On the other hand, it is argued that a relative obstruction of CSF flow could take place, following research by Chen et al., who described a more crowded posterior fossa in PCH patients.

PCH may respond to Indomethacin (50-150 mg daily) which has also been attributed to its carbonic anhydrase inhibitor property, leading to decreased intracranial pressure.

Knowledge on the clinical aspects of this disorder is a necessary step towards the understanding of the pathophysiology and subsequent development of targeted therapies, hence, a better description of PCH patients is required.

### **Ethics approval required**

Old ethics approval format

### **Ethics approval(s)**

South East Scotland Research Ethics Committee 01, Waverley Gate, 2-4 Waterloo Place, Edinburgh, EH1 3EG, Tel: +44 (0)131 465 5473, Email: Sandra.Wyllie@nhslothian.scot.nhs.uk, 30 /01/2019, REC ref: 18/SS/0165, Protocol number: 1, IRAS project ID: 256341

### **Study design**

Cross-sectional cohort study

### **Primary study design**

Observational

### **Secondary study design**

Cross sectional study

**Study setting(s)**

Hospital

**Study type(s)**

Diagnostic

**Participant information sheet**

Not available in web format, please use contact details to request a participation information sheet.

**Condition**

Primary cough headache

**Interventions**

The study consists of one visit. Previously, a pre-screening questionnaire performed at the cough clinic will determine potential eligibility. Study visit: consent will be sought and, after screening, eligible participants will go through a semi-structured interview in which general medical history and features of headache will be assessed. Neurological examination will be performed as well as a modified Valsalva Test.

**Intervention Type**

Other

**Primary outcome measure**

The clinical features and prevalence of cough headache in patients attending a Cough Unit and the differences between primary and secondary cough headache, measured using questionnaire adapted from the usual headache clinic and cough clinic interviews at the single study visit.

**Secondary outcome measures**

Measured using questionnaire adapted from the usual headache clinic and cough clinic interviews at the single study visit:

1. Specific comorbidities related to cough headache
2. The use of opioids and other drugs in cough patients and possible relationship with the development of chronic headache
3. The utility of the modified Valsalva manoeuvre in these patients

**Overall study start date**

06/02/2019

**Overall study end date**

31/12/2020

**Eligibility****Participant inclusion criteria**

1. Patients are capable of giving signed informed consent indicating that the subject has been informed of all pertinent aspects of the trial detailed in the patient information sheet (PIS), informed consent form (ICF), and in the protocol
2. Subjects must be willing to receive a telephone call or travel to and from King's College Hospital as preferred, during normal working hours

3. Diagnosis of Primary Cough Headache (PCH) using criteria previously published
4. Aged 18-80 years inclusive
5. Willing and able to comply with scheduled visits and study procedures

**Participant type(s)**

Patient

**Age group**

Adult

**Lower age limit**

18 Years

**Upper age limit**

80 Years

**Sex**

Both

**Target number of participants**

50

**Participant exclusion criteria**

1. Pregnancy or breastfeeding from consent until the end of study involvement
2. History of psychosis, depression or psychological diseases either (a) requiring ongoing psychoactive drugs, or (b) that the Investigator has reason to believe will either affect the patient's neural pathways or hinder the performance of the patient with regard to ability to successfully complete the tasks required of them according to the protocol
3. History/presence of cerebral haemorrhage, brain tumour, brain aneurysm, cryptococosis or other brain mass lesion within the last 12 months
4. Any other medical condition that in the opinion of the Investigator would make the subject unsuitable for the study
5. Inclusion to another research study within the past 30 days

**Recruitment start date**

11/02/2019

**Recruitment end date**

01/12/2020

**Locations****Countries of recruitment**

England

United Kingdom

**Study participating centre**

**King's College Hospital**  
Denmark Hill  
London  
United Kingdom  
SE5 9RS

## Sponsor information

### Organisation

King's College London

### Sponsor details

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### Sponsor type

University/education

### Website

<https://www.kcl.ac.uk/index.aspx>

### ROR

<https://ror.org/0220mzb33>

### Organisation

King's College Hospital NHS Foundation Trust

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### Sponsor type

Hospital/treatment centre

### Website

## **Funder(s)**

### **Funder type**

Government

### **Funder Name**

NIHR BRC grant – Pain theme

## **Results and Publications**

### **Publication and dissemination plan**

The results of this study will be published in acclaimed international journals, relevant to the field of study.

### **Intention to publish date**

06/02/2021

### **Individual participant data (IPD) sharing plan**

Each patient will be assigned a study number. Personal Identifiable Information (PII) and medical records from participants recruited at the site (King's College Hospital) will be de-identified and recorded on source documents created specifically for the study. Source documents from participants recruited at the site (King's College Hospital) and consent forms will be stored in the Headache Group, Clinical Research Office, Wellcome Foundation Building, Denmark Hill Campus, King's College London. Access to this office is restricted and paperwork is stored in locked filing cabinets.

Source documentation collected will be stored as per local data protection standard operating procedures.

Clinical data from source documents will be entered by an investigator into an Excel database in an anonymized format, locked with a password and kept on a KCH computer. PII will be kept on a different Excel file on a different KCH computer, also locked with a different password than the other file. KCH computers are located in the same office which is locked and accessible to the investigators only.

King's College Hospital will keep identifiable information about participants for 12 months after the study has finished.

During study conduct, data will be reviewed to ensure that the protocol and Good Clinical Practices are being followed. Source document may be reviewed to confirm that data recorded on the CTF is accurate. The site may be subject to review by the Independent Ethics Committee and/or to inspection by appropriate regulatory authorities. The investigator and relevant personnel will ensure that they will be available during monitoring and possible audits and inspections.

No identifiable information will be provided. For any other documents, please contact the Institute of Psychiatry, Psychology and Neuroscience (King's College London), Headache Group on:

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## IPD sharing plan summary

Available on request

### Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Protocol file</a>	version V2.2	28/01/2019	12/02/2019	No	No
<a href="#">HRA research summary</a>			28/06/2023	No	No