ISRCTN07139948 https://doi.org/10.1186/ISRCTN07139948

Pilot trial of omeprazole in idiopathic pulmonary fibrosis (PPIPF Study)

Submission date 10/02/2014	**Recruitment status** No longer recruiting	[_] Prospectively registered [_] Protocol
Registration date 11/02/2014	**Overall study status** Completed	[_] Statistical analysis plan [X] Results
Last Edited 30/09/2026	**Condition category** Respiratory	[_] Individual participant data

Plain English summary of protocol

Background and study aims

Idiopathic pulmonary fibrosis (IPF) is a disease of unknown cause in which areas of normal lung tissue are replaced by scars. As a result it becomes harder for the lungs to inhale oxygen from the air. IPF is commonly progressive, and around 50% of patients diagnosed with the disease die after about 3 years. The most common troublesome symptoms of IPF are breathlessness on exertion and cough. No drug treatments have been clearly shown to improve the death rate or to significantly improve symptoms in IPF.

In recent years it has been recognised that cough can be caused by small amounts of liquid coming up from the stomach and going down the wrong way into the lungs, a process commonly known as reflux. As liquid in the stomach is usually acidic, patients' lungs may repeatedly be exposed to small amounts of acid. Reflux is unusually common in IPF and could potentially contribute to the unbearable cough found with the disease. However, there are many potential causes for cough in IPF.

Stomach acid can be efficiently switched off by drugs called proton pump inhibitors, one of which is called omeprazole. If reflux of stomach acid does contribute to cough in IPF, omeprazole might be expected to reduce cough. The purpose of this study is therefore to test whether omeprazole does reduce cough in patients with IPF.

Who can participate?

Patients with idiopathic pulmonary fibrosis aged between 40 and 85 years.

What does study involve?

Participants will be randomly allocated to one of two groups. One group will take 20 mg of Omeprazole twice daily and the other group will take a matching placebo (dummy). Both groups will take their medications orally before food for 90 days.

Before starting the study and towards the end of the study participants will undergo tests which will be distributed over six visits.

What are the possible benefits and potential risks for participants?

There is no direct benefit to participants. If the results are encouraging, this would pave the way for larger studies to comprehensively assess the potential role of omeprazole as a new effective treatment for IPF.

The risks from taking part are considered to be low. Cough monitoring is a research tool, but is not associated with any known risks. All of the other tests are routinely carried out in clinical practice, and all are considered to be low-risk procedures. Omeprazole has been used in clinical practice by millions of patients and is regarded as having an extremely low rate of serious side effects.

Where is the study run from?
Interstitial Lung Disease Clinic in Royal Victoria Infirmary, Newcastle Upon Tyne, UK.

When is the study starting and how long is it expected to run for?
The recruitment is expected to start in February - March 2014. Participants will be enrolled for period of 3 months.

Who is funding the study?
British Lung Foundation, UK.

Who is contact for study?
Professor John Simpson

Contact information

Type(s)
Scientific

Contact name
Dr Prosenjit Dutta

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Additional identifiers

ClinicalTrials.gov (NCT)
NCT02085018

Clinical Trials Information System (CTIS)
2013-003301-26

Protocol serial number
15732

Study information

Scientific Title

A randomized double blinded placebo-controlled pilot trial of omeprazole in idiopathic pulmonary fibrosis (IPF)

Acronym
PPIPF

Study objectives
Omeprazole reduces cough in IPF.

More details can be found at: http://public.ukcrn.org.uk/search/StudyDetail.aspx?StudyID=15732

Ethics approval required
Old ethics approval format

Ethics approval(s)
NRES committee of Yorkshire & The Humber - Leeds West, 10/01/2014, REC ref: 13/YH/0284

Primary study design
Interventional

Study design
Randomised; Interventional; Design type: Treatment

Study type(s)
Treatment

Health condition(s) or problem(s) studied
Idiopathic Pulmonary Fibrosis - Respiratory (Chest) Disease

Interventions
Omeprazole or matched placebo
Experimental Arm: Omeprazole 20 mg twice daily
Comparator Arm: Matched placebo twice daily
Study Entry: Single Randomisation only

Patients will be randomised 1:1 to Omeprazole 20 mg twice daily of matching placebo to be taken orally before food for 90 days. Prior to starting and towards the end of the study participants will undergo the following tests which will be distributed over six visits.
Visit 1: breathing tests, walk test and 24-hour cough monitor test
Visit 2: reflux study
Visit 3: start trial medication for 3 months
Visit 4, 5, and 6: ideally during the last 3 days (but can be within 2 weeks) of completion of study medication
Visit 4: duplicate of Visit 1
Visit 5: duplicate of Visit 2
Visit 6: telescopic test for lungs (bronchoscopy)

Intervention Type
Drug

Phase

Not Applicable

Drug/device/biological/vaccine name(s)
Omeprazole

Primary outcome(s)
1. Change in objectively measured cough frequency from beginning of study (baseline) to end of treatment (within last 2 weeks of completion of treatment). This will be compared in two groups.
2. Range of other measurements will be assessed such as the numbers of patients eligible to take part, agreeing to randomization and providing outcome data.

Key secondary outcome(s)
1. Changes in symptoms of cough and reflux at the end of treatment (as measured by validated questionnaires)
2. Changes in amount of acid and nonacid reflux at the end of treatment
3. Changes in lung function tests and distance walked in 6 minutes after treatment
4. Amount of inflammation and rate of infection in lungs
5. Any adverse events related to medication
6. Rates of eligibility, recruitment, randomization and study completion: feasibility and acceptability; Timepoint(s): end of study period.

Completion date
30/09/2016

Eligibility

Key inclusion criteria
A pragmatic clinical definition of IPF will be used, in which recruited patients must fulfill all of the following criteria:

1. IPF is considered the most likely diagnosis by the regional interstitial lung disease multidisciplinary team meeting
(ILD-MDT)
2. History of cough, with or without exertional dyspnoea
3. High resolution computed tomography (HRCT) scan features of honeycombing in a predominantly basal and subpleural distribution
4. Bibasal crackles on auscultation
5. Features of a restrictive ventilatory defect (vital capacity (VC) <90% predicted and/or diffusion factor for carbon monoxide (Tco) <90% predicted)
6. Aged 40-85 years

Patients with radiological emphysema will be eligible so long as the diagnosis of IPF is secure, i. e., all the features above are satisfied.

If the regional ILD-MDT cannot reach a clear consensus as to the diagnosis, the case will be referred to two experts in ILD from outside the region, and the patient will be eligible if both consider IPF to be the most likely diagnosis.
Patients taking a PPI during screening will potentially be eligible. In these cases the indication for ongoing treatment will be reviewed.
1. Patients taking short courses (e.g., 2 months) of PPI will be eligible once the treatment has been discontinued for a minimum of 1 month.

2. There are few licensed indications for long-term omeprazole other than Zollinger-Ellison syndrome. Therefore,
unless there is a known diagnosis of Zollinger-Ellison or a history of significant dyspepsia or gastrointestinal bleeding
during a previous discontinuation of PPI, patients on long-term PPI will be asked to consider a trial of supervised
discontinuation. If he/she agrees and provides written consent to a trial of discontinuation, the GP will be contacted. If
both the patient and the GP agree to a trial of discontinuation, the patient will be eligible for the study if he/she provides written consent after at least 2 weeks without PPI.
3. Patients taking antacids, prokinetics or raft alginates at the time of screening will be eligible if they have been off these treatments for a period of at least 2 weeks.
4. Target Gender: Male & Female; Upper Age Limit 85 years ; Lower Age Limit 40 years

Participant type(s)
Patient

Healthy volunteers allowed
No

Age group
Senior

Sex
All

Total final enrolment
45

Key exclusion criteria
1. Known allergy to omeprazole or other PPI
2. Concomitant use of warfarin, diazepam, phenytoin or ketoconazole
3. Concomitant use of a regular PPI, antacid, prokinetic or raft alginate during the trial period.
4. History of upper respiratory tract infection, lower respiratory tract infection or exacerbation of IPF in the 4 weeks before starting study drugs
5. Active trial of treatment for IPF (e.g., prednisolone, pirfenidone, N-acetylcysteine) started in the 4 weeks before starting study drugs
6. Documented history of hepatic cirrhosis
7. Pregnancy or lactation
8. ILD-MDT considers the most likely cause of the patient's ILD to be a condition other than IPF, for example rheumatoid lung, systemic sclerosis ILD, asbestosis, chronic hypersensitivity pneumonitis, sarcoidosis, etc.
9. Concurrent enrolment in a trial of a Clinical Trials of Investigational Medicinal Product (CTIMP) for IPF

Date of first enrolment
01/02/2014

Date of final enrolment
30/09/2016

Locations

Countries of recruitment
United Kingdom

England

Study participating centre
4th Floor William Leech Building
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Newcastle Upon Tyne
England
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Sponsor information

Organisation
The Newcastle upon Tyne Hospitals NHS Foundation Trust (UK)

ROR
https://ror.org/05p40t847

Funder(s)

Funder type
Charity

Funder Name
British Lung Foundation (UK) Grant Codes: IPFPSG12-7

Alternative Name(s)
BLF

Funding Body Type
Private sector organisation

Funding Body Subtype
Trusts, charities, foundations (both public and private)

Location
United Kingdom

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		04/01/2019	30/09/2026	Yes	No
Basic results			21/06/2019	No	No
HRA research summary			28/06/2023	No	No