# Efficacy and safety of orally inhaled apomorphine in patients with Parkinson's disease

Submission date	Recruitment status	<ul><li>Prospectively registered</li></ul>
17/12/2008	No longer recruiting	☐ Protocol
Registration date	Overall study status	Statistical analysis plan
16/02/2009	Completed	Results
Last Edited	Condition category	Individual participant data
17/05/2016	Nervous System Diseases	<ul><li>Record updated in last year</li></ul>

# Plain English summary of protocol

Not provided at time of registration

# Contact information

## Type(s)

Scientific

## Contact name

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## Contact details

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# Additional identifiers

Protocol serial number VR040/2/008

# Study information

Scientific Title

A phase IIb randomised, double-blind, placebo-controlled, parallel-group study investigating the efficacy and safety of inhaled apomorphine in patients with "on-off" or "wearing-off" effects associated with Parkinson's disease

## Study objectives

Apomorphine administered by injection or subcutaneous pump is approved for the treatment of disabling motor fluctuations that persist in PD patients, despite treatment with levodopa and/or oral dopamine agonists. Inhaled apomorphine is expected to present a more rapid clinical effect achieved via a convenient and non-invasive route of administration. Treatment consistency will be improved, allowing accurate and precise dose setting, thereby minimising peak-dose dyskinesia incidence. Based upon inhaled apomorphine bioavailability, an improved risk/benefit profile may be established, resulting in a reduced need to administer concomitant domperidone medication.

## Ethics approval required

Old ethics approval format

## Ethics approval(s)

A favourable opinion was given by Scottish A Research Ethics Committee on 12/11/2008 and by Ricerca Biomedica dell'Universita Degli Studi Gabriele D'Annunzio e della Asl di Chieti, Italy on 27 /11/2008. Approval is pending from Ethics Committee of the Dept. of Human Medicine, Philipps University, Marburg, Germany.

## Study design

Randomised double-blind placebo-controlled parallel-group study

## Primary study design

Interventional

# Study type(s)

Treatment

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

Parkinson's disease

## **Interventions**

During an In-Clinic dosing period patients will be titrated to their optimal delivered dose of Apomorphine HCl or placebo based on tolerance and efficacy, for up to 6 weeks. During the At-Home dosing period, patients will take their study medication for the treatment of sudden "on-off" or "wearing-off" episodes up to 5 times per day for 4 weeks at his or her optimal dose as determined during the In-Clinic dosing period. Patients will be followed-up for a further 3 weeks.

## Intervention Type

Drug

## Phase

Phase II

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

Apomorphine

## Primary outcome(s)

Change in "off" time per day compared with the baseline value derived from the three-consecutive-day patient diary card information completed prior to visit 1 and prior to visits 5 and 6 during the At-Home dosing period and the maximum change in total UPDRS III score from predose to post-dose during the In-Clinic dosing titration period.

## Key secondary outcome(s))

- 1. Proportion of "off" events per day aborted by study treatment
- 2. Interval between dose administration and onset of "on" state
- 3. Period from onset of "on" state to return to an "off" state
- 4. Mean daily duration in "on" without dyskinesias
- 5. Mean daily duration in "on" with non-troublesome dyskinesias
- 6. Mean daily duration in "on" with troublesome dyskinesias
- 7. Time taken for the study medication to start working and the period of time when the study medication was working
- 8. Mean number of "off" episodes per day
- 9. Mean daily period in "off" state
- 10. Mean daily period in any "on" state
- 11. Mean daily period asleep

## Safety parameters:

- 12. Incidence of treatment-emergent AEs
- 13. Changes in laboratory tests and physical examination
- 14. Changes in vital signs, ECG, forced vital capacity (FVC)/FEV1

All measured from screening to the end-of-treatment or close out visit.

## Completion date

15/11/2009

# Eligibility

## Key inclusion criteria

- 1. Male and female patients between the ages of 30 and 90 years
- 2. A clinical diagnosis of PD of at least 5 years duration
- 3. Fulfilled Steps 1 and 2 of the UK Brain Bank Criteria
- 4. Classified as Hoehn and Yahr Stage II IV in "on" state
- 5. Have suffered from motor fluctuations associated with fluctuating idiopathic PD and a minimum of a 2-hour average daily "off" time
- 6. Showed dopaminergic responsiveness as defined by equal to or more than 30% change (reduction) in Unified Parkinson's Disease Rating Scale (UPDRS III) score compared to the predose value
- 7. Optimised on oral therapy, including levodopa not greater than 1500 mg/day (in combination with decarboxylase inhibitors) at least 30 days before screening
- 8. Receiving (for at least 30 days), or have received in the past, but discontinued due to adverse events (AEs), at least one of the following types of medications:
- 8.1. Dopamine agonist
- 8.2. Catechol-o-methyltransferase inhibitor
- 8.3. Monoamine oxidase B inhibitor
- 9. Understand (with carer assistance) their daily medications

## Participant type(s)

Patient

## Healthy volunteers allowed

No

## Age group

Adult

#### Sex

All

## Key exclusion criteria

- 1. Very serious or advanced disease
- 2. Dyskinesias rated as severe, i.e. equal to 2 in Item 32 of the UPDRS IV assessment and equal to 2 in Item 33 of the UPDRS IV assessment, at screening
- 3. Previous intolerance or allergy to apomorphine or any of its constituents, or any previous significant historic complication from oral dopamine agonist (DA) therapy
- 4. Pregnant or lactating females, and patients with known human immunodeficiency virus or active chronic hepatitis B or C infection
- 5. Any clinically significant abnormality or finding from examination, tests, or history that may compromise patient safety, specifically any history of renal or hepatic impairment
- 6. Relevant electrocardiogram (ECG) abnormalities
- 7. Forced expiratory volume in one second (FEV1) equals 65% predicted
- 8. Evidence of orthostatic or persistent arterial hypotension
- 9. Hypertension
- 10. Cancer
- 11. Those taking certain prohibited medications or anabolic steroids or antipsychotics (some exceptions apply)
- 12. Those taking 5HT3 antagonists or clozapine
- 13. History of drug or alcohol abuse
- 14. Current, or a history of, hypersensitivity to domperidone, pituitary tumour (prolactinoma), or gastrointestinal blockage or haemorrhage
- 15. Known non-responders to apomorphine treatment for "off" episodes, e.g. in previous challenge tests or trials

## Date of first enrolment

15/01/2009

## Date of final enrolment

15/11/2009

# Locations

## Countries of recruitment

United Kingdom

Scotland

Germany

Study participating centre Southern General Hospital Glasgow United Kingdom G51 4TF

# Sponsor information

## Organisation

Vectura Limited (UK)

## **ROR**

https://ror.org/000ydq217

# Funder(s)

# Funder type

Industry

## Funder Name

Vectura Limited (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?

Participant information sheet

Participant information sheet 11/11/2025 11/11/2025 No