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A trial of Exenatide for the treatment of moderate severity Parkinson's disease

Submission date
24/01/2014

Recruitment status
No longer recruiting

Registration date
24/01/2014

Overall study status
Completed

Last Edited
31/05/2018

Condition category
Nervous System Diseases

[X] Prospectively registered
[_] Protocol
[_] Statistical analysis plan
[X] Results
[_] Individual participant data

Plain English summary of protocol

Background and study aims
Exenatide is a licensed, safe and effective treatment for patients with diabetes mellitus. Laboratory work has shown strong evidence that this drug has beneficial 'disease modifying' effects when given to animals with a range of experimental models of Parkinson's disease (PD). A pilot study in 40 patients with moderate symptoms of PD has already been completed. Those patients who received Exenatide had improved results in a number of assessments. This project aims to confirm the initial results seen with Exenatide treatment in the pilot study.

Who can participate?
Sixty patients between 25 and 75 years of age with moderate symptoms of PD.

What does the study involve?
Participants will be randomly allocated to receive either Exenatide or placebo (dummy) injections once weekly. The drug/placebo will be given as a once weekly injection under the skin in a similar way to one of the conventional 'symptomatic' treatments for PD (Apomorphine). Detailed assessments will be made of all patients at baseline and periodically for a total of 60 weeks. Aside from these assessments, all patients will continue their regular PD medications throughout the trial with adjustments made only according to clinical need. All patients will undergo two brain scans that assess the severity of PD, at both baseline and follow-up visits to help understand possible mechanisms of action of Exenatide.

What are the possible benefits and risks of participating?
During the study you will have a regular review of your Parkinson's by an experienced Parkinson's specialist. You will be advised on adjustment of other PD medication as necessary. Laboratory studies suggest that Exenatide may be helpful to slow down or reverse the PD process. We cannot promise the study will help you but the information we get from this study will help improve the treatment of people with PD. The main disadvantage of taking part in this study is the need to spend several hours without your regular Parkinson's disease medication on six occasions. If you feel that this would cause you too much discomfort then you should not take part. You will need to have blood tests at each assessment, which carries the risk of bruising, discomfort or fainting. The Lumbar puncture test can be uncomfortable. Local anesthetic will be used to make the skin numb. If you experience discomfort, tell the doctor

performing the lumbar puncture, and they will use additional local anesthetic. After the lumbar puncture, you will be asked to lie down for 1 hour. This is to reduce the risk of headache. Some patients experience headache that can last up to a week after a lumbar puncture. The DaTSCAN exposes you to a small amount of radioactivity. We are all exposed to natural background radiation every day and 1 in 4 of us will develop cancer at some point in our lives even if we have never had an X-ray. The radioactivity you will be exposed to in this trial is about the same as you will receive from about four years exposure to natural background radiation, and over less time for some parts of the UK, e.g. Cornwall, where background radiation is higher. Patients taking Exenatide may experience nausea, vomiting or diarrhoea. These symptoms usually settle after the first few doses. Weight loss can also occur with Exenatide treatment. If weight loss occurs too quickly this can have harmful consequences. All patients will be weighed at each hospital visit and we will advise you to monitor your weight at home in between hospital visits. A possible very rare side effect of Exenatide is an illness called pancreatitis. This is inflammation of the pancreas gland. This illness causes severe stomach pains, may require hospital treatment, and has even led to patients dying. Recurrent or chronic pancreatitis has been linked to an increase in risk for cancer of the pancreas. We will monitor for any indication of pancreatitis during the course of the study using blood tests. If you experience stomach pain while you are at home, in between hospital visits, it is very important to contact your study doctor as soon as you can. If you do get pancreatitis, your study medication will be stopped and you may be given other treatment, such as intravenous fluids, oxygen and painkillers to treat the pancreatitis. You will not be able to continue in the study if you do get pancreatitis. It is possible that if Exenatide treatment is given to a pregnant woman, it will harm the unborn child. Pregnant women must not therefore take part in this study. It is also possible that the treatment could damage sperm and consequently any conceived baby during the course of the study. All patients both male and female should use adequate contraception during the study. Your study doctor will be able to explain to you what we mean by adequate contraception.

Where is the study run from?
The study is being co-ordinated by University College London Clinical Trials Unit. Patients will have an appointment at the National Hospital for Neurology and Neurosurgery - part of University College London Hospitals.

When is the study starting and how long is it expected to run for?
The study will start in June 2014 and end in June 2016. Patient recruitment will finalise in March 2015.

Who is funding the study?
This research is being funded by the Michael J Fox Foundation for Parkinson's Research and the drug is being provided free of charge by Bristol-Myers Squibb/AstraZeneca.

Who is the main contact?
Guy Schroeter
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Study website
http://www.ucl.ac.uk/exenatide-pd

Contact information

Type(s)
Scientific

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Additional identifiers

EudraCT/CTIS number
2013-003363-64

IRAS number

ClinicalTrials.gov number
NCT01971242

Secondary identifying numbers
15833

Study information

Scientific Title
A randomised, double-blind, placebo-controlled, single-centre, 60-week trial of Exenatide once weekly for the treatment of moderate severity Parkinson's disease

Acronym
Exenatide-PD

Study objectives
This study is a clinical trial in patients with Parkinson's disease (PD), of a drug called Exenatide which is already licensed for the treatment of patients with Type 2 Diabetes. There have been several groups that have confirmed that Exenatide has beneficial effects on nerve cells when tested in the laboratory, that raises the possibility that Exenatide may slow down or stop the degenerative process of Parkinson's disease. In an open label trial in patients with Parkinson's disease who self administered the drug for 1 year, we have previously shown that the drug is well tolerated and shows encouraging effects on the movement and non-movement aspects of the disease, even 2 months after patients stopped administering the drug. The next step is therefore to formally evaluate whether Exenatide really is a potential "neuroprotective" drug, i. e. stops the nerve cells dying in Parkinson's disease, by conducting a double blind, placebo controlled trial.

More details can be found at: http://public.ukcrn.org.uk/search/StudyDetail.aspx?StudyID=15833

Ethics approval required
Old ethics approval format

Ethics approval(s)
London - Brent, 11/11/2013, ref: 13/LO/1356

Study design
Randomised interventional treatment trial

Primary study design
Interventional

Secondary study design
Randomised controlled trial

Study setting(s)
Hospital

Study type(s)
Treatment

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

Health condition(s) or problem(s) studied
Topic: Dementias and Neurodegenerative Diseases Research Network; Subtopic: Parkinsons Disease; Disease: Parkinson's disease

Interventions
Exenatide active and placebo

Bydureon (exenatide) extended-release for injectable suspension. Each dose (2 mg) of Exenatide extended release is supplied as a vial containing the Exenatide powder and an inactive ingredient called polylactide-co-glycolide and sucrose. This is supplied together with diluent (sterile water containing carboxymethylcellulose sodium, polysorbate 20, sodium phosphate monobasic monohydrate, sodium phosphate dibasic heptahydrate and sodium chloride) to allow reconstitution of the powder in solution.

Frequency of administration - once weekly
Total duration of treatment and follow-up - 15 months total

Intervention Type
Drug

Phase
Not Applicable

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

Primary outcome measure
Motor score in practically defined 'OFF' medication state; Timepoint(s): 60 weeks (i.e. 12 weeks following end of treatment).

Secondary outcome measures
Differences at 48 and 60 weeks for each of the secondary outcomes will be compared between groups according to treatment allocation (using ANCOVA to adjust for differences at baseline)

Overall study start date
01/04/2014

Completion date
01/03/2016

Eligibility

Key inclusion criteria
1. Diagnosis of Parkinson's disease
2. Males or females
3. Hoehn and Yahr stage ≤ 2.5 in the on medication state
4. Between 25 and 75 years of age
5. On dopaminergic treatment with wearing off phenomena
6. Ability to self-administer, or to arrange carer administration of trial drug
7. Documented informed consent to participate

Participant type(s)
Patient

Age group
Adult

Sex
Both

Target number of participants
UK Sample Size: 60

Key exclusion criteria
1. Diagnosis or suspicion of other cause for Parkinsonism. Subject without DaTscan appearances consistent with diagnosis of PD will not be eligible
2. Body mass index <18.5
3. Known abnormality on CT or MRI brain imaging considered likely to compromise compliance with trial protocol/DaTSCAN acquisition
4. Concurrent dementia defined by a score lower than 120 on the Mattis Dementia Rating Scale
5. Concurrent severe depression defined by a score >16 on the MADRS
6. Prior intra-cerebral surgical intervention for Parkinson's disease
7. Already actively participating in a trial of a device, drug or surgical treatment for Parkinson's disease
8. Previous exposure to Exenatide
9. Severely impaired renal function with creatinine clearance <30 ml/min
10. History of pancreatitis
11. Severe gastrointestinal disease (e.g., gastroparesis)
12. Hyperlipidaemia
13. History or suspicion of thyroid cancer
14. Known or suspected intolerance of DaTSCAN or Potassium Iodide administration
15. Females that are pregnant or breast feeding. Women of childbearing potential who are unwilling or unable to use an acceptable method to avoid pregnancy for the entire study period and up to 4 weeks after the last dose of study drug
16. Participants who lack the capacity to give informed consent
17. Any medical or psychiatric condition which in the investigator's opinion compromises the potential participant's ability to participate

Date of first enrolment
01/04/2014

Date of final enrolment
13/03/2015

Locations

Countries of recruitment
England

United Kingdom

Study participating centre
National Hospital for Neurology and Neurosurgery
33 Queen Square

London
United Kingdom
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Sponsor information

Organisation
University College London (UK)

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Sponsor type
University/education

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http://www.ucl.ac.uk/

ROR
https://ror.org/02jx3x895

Funder(s)

Funder type
Charity

Funder Name
Michael J. Fox Foundation for Parkinson's Research

Alternative Name(s)
Michael J. Fox Foundation, Fundación Michael J. Fox, The Michael J. Fox Foundation for Parkinson's Research, The Michael J. Fox Foundation, Michael J Fox Foundation for Parkinson's Disease Research, Michael J Fox Foundation for Parkinson's Research, MJFF

Funding Body Type
Government organisation

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

Location
United States of America

Results and Publications

Publication and dissemination plan
Results will be published around July/August 2016 (anticipated). Participants will receive the results beforehand – details to be confirmed at a later date.

Intention to publish date
01/07/2016

Individual participant data (IPD) sharing plan

IPD sharing plan summary
Other

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article	results	07/10/2017		Yes	No
HRA research summary			28/06/2023	No	No