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Parkinson's disease and alpha-blocker

Submission date
12/08/2013

Recruitment status
No longer recruiting

Registration date
18/09/2013

Overall study status
Completed

Last Edited
01/04/2014

Condition category
Nervous System Diseases

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

Plain English summary of protocol

Background and study aims
Parkinsons disease (PD) is a condition in which part of the brain becomes progressively more damaged over many years (a progressive neurological condition). Lower urinary tract symptoms (LUTS) are frequent in patients with PD. It is estimated that 27% to 60% of PD patients present with LUTS during the course of their disease. The most common complaints are nocturia (having to get up during the night to pass urine), intermittent flow pattern, incomplete emptying and urgency/frequency, symptoms which have a significant negative effect on patients quality of life. Tests show the abnormalities in most patients, which may include detrusor overactivity (detrusor muscles contract too often, creating an urgent need to go to the toilet), detrusor underactivity and bladder outlet obstruction. Several factors account for the high prevalence of LUTS among patients with PD, including bladder abnormalities secondary to the neurological disease such as detrusor overactivity and inappropriate urethral sphincter relaxation. In addition, urinary tract comorbidities such as prostate enlargement and degenerative alterations of the urinary tract associated with aging may coexist. Thus, it is difficult to establish the role played by each one of these factors in the genesis of LUTS. Men with PD who are bothered by their LUTS usually receive treatment with drugs, which may include alpha-blocking and/or antimuscarinic agents, according to their symptoms and test findings. Although α-adrenoceptor antagonists (a type of drug) are widely used for the treatment of LUTS in men, including PD patients, no studies have evaluated their effects in this population. Since prostate enlargement causing bladder outlet obstruction is a very prevalent condition in older men, the age group commonly developing PD, it is important to evaluate the effect of an alpha-blocker in the treatment of LUTS in this population. Furthermore, it would be convenient to be able to identify factors associated with successful medical treatment of voiding dysfunction. Since it has been shown in some studies that the severity of neurological impairment is associated with increased risk of LUTS, we propose that it might also be used as a predictor of pharmacological response.

Who can participate?
Subjects with a established diagnosis of PD were referred from Neurology Department Clinic for the treatment of LUTS.

What does the study envolve?
The study involves the evaluation of the use of doxazosin in patients with PD with voiding dysfunction. The subjects will all receive the same treatment. Each patient received 4 mg doxazosin once daily at bedtime.

What are the possible benefits and risks of participating?
Understanding the pattern of response and possible predictors of response can benefit these patients in the future.The risks are minimal and doxazosin is a widely established marketed drug.

Where the study run from?
This study was run from the Division of Urology, School of Medicine, University of São Paulo (Brazil).

When is the study starting and how long is it expected to run for?
The study started in August 2005 and ran for two years.

Who is funding the study?
University of São Paulo (Brazil) - School of Medicine, Division of Urology.

Who is the main contact?
Professor Cristiano Gomes, crismgomes@uol.com.br
Professor Jose de Bessa Junior, bessa@uefs.br

Contact information

Type(s)
Scientific

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Additional identifiers

EudraCT/CTIS number

IRAS number

ClinicalTrials.gov number

Secondary identifying numbers
PD 2003

Study information

Scientific Title

Predicting response to doxazosin in patients with voiding dysfunction and Parkinson's disease (PD): impact of the neurological impairment

Study objectives
Since benign prostatic hyperplasia (BPH) causing bladder outlet obstruction is a very prevalent condition in older men, the age group commonly developing PD, it is important to evaluate the effect of an alpha-blocker in the treatment of lower urinary tract symptoms (LUTS) in this population. Furthermore it would be convenient to be able to identify clinical prognostic factors associated with successful medical treatment of voiding dysfunction. Since it has been shown in some studies that the severity of neurological impairment is associated with increased risk of lower urinary tract symptoms, we postulated that it might also be used as a predictor of pharmacological response.

Ethics approval required
Old ethics approval format

Ethics approval(s)
CaPPESQ, Ethics Committee in Clinical Research (Comite de Etica em pesquisa Clinica). Hospital das Clinicas - FMUSP Protocol ref: 023/2003

Study design
12-week open label study

Primary study design
Interventional

Secondary study design
Non randomised controlled trial

Study setting(s)
Hospital

Study type(s)
Diagnostic

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
Parkinson's Disease (PD) and Bladder Outlet Obstruction (BOO)

Interventions
The severity of neurological impairment was assessed with the Unified Parkinson's disease rating scale. The assessment of this scale was performed by the referring neurologists and all patients on anti-parkinsonian medication were assessed in the on condition. The drug regimen of each patient was registered. Lower urinary tract symptoms (LUTS) were evaluated with the International Continence Society Male Short Form questionnaire (ICSmSF) consisting of 14 questions regarding voiding symptoms (ICSV), incontinence [interstitial cystitis symptom index (ICSI)], frequency, nocturia (ICSFN) and an additional question concerning the quality of life

(QOL) related to urinary symptoms. Two questions about the duration of PD and LUTS were also included. Patients were included irrespective of their ICSmSF score if they were bothered by their LUTS. They were specifically questioned whether they wanted to receive medications for their symptoms and all were willing to undergo pharmacological treatment for it. All patients underwent further evaluation before medical treatment, including urinalysis, serum creatinine, prostate-specific antigen (PSA), transabdominal prostate and urinary tract sonography as well as full urodynamic studies consisting of free uroflowmetry, post void residual volume (PVR), filling cystometry and pressure-flow studies. Bladder outlet obstruction (BOO) and detrusor contractility were assessed with the Schafer nomogram. Patients with mild obstruction (areas I and II of the nomogram) were included in the unobstructed group. Only patients whose detrusor contractility was considered very weak (VW) in the nomogram were classified as having detrusor underactivity. Methods, definitions and units used conform to the standards recommended by the ICS.

A total of 33 men were prospectively enrolled in a 12-week open label study. Each patient received 4 mg/day of extended release doxazosin at bedtime. Men were re-evaluated at 12 weeks and efficacy was assessed by analyzing treatment-related changes from baseline to week 12 in ICSmSF, QOL, peak flow rates (Qmax), PVR and urodynamic parameters. Adverse events reported by the patients or observed by the investigator during the study duration were recorded.

To evaluate the utility of different clinical parameters as predictors of response to alpha-blockers, the association between age, severity of neurological impairment, duration of PD, use of levodopa, ICSmSF, LUTS duration, prostate volume as well as urodynamic parameters and the response to the pharmacological treatment were assessed.

Intervention Type
Drug

Phase
Not Applicable

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

Primary outcome measure
Treatment success (responder) was defined as an improvement of more than or equal to 50% of the LUTS, as measured by the ICSmSF questionnaire.

Secondary outcome measures
No secondary outcome measures

Overall study start date
25/08/2005

Completion date
25/08/2007

Eligibility

Key inclusion criteria

1. Idiopathic PD
2. Age above 40 years
3. Patients should have Bladder Outlet Obstruction (BOO), detrusor underactivity or an equivocal obstruction grade (Schafer zone II) associated with a post void residual volume > 150 ml.
4. Only patients with an abnormal voiding pattern in the pressure-flow study were included

Participant type(s)
Patient

Age group
Adult

Sex
Both

Target number of participants
50

Key exclusion criteria
1. Patients with multiple system atrophy and other neurological conditions.
2. Subjects who used any bladder or prostate medications including alpha blockers, 5-alpha-reductase inhibitors or antimuscarinics for the past six months
3. Those with a history of pelvic or prostate surgery and/or radiotherapy

Date of first enrolment
25/08/2005

Date of final enrolment
25/08/2007

Locations

Countries of recruitment
Brazil

Study participating centre
Av. Dr. Enéas de Carvalho Aguiar
Sao Paulo
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Sponsor information

Organisation

Hospital das Clinicas (Brazil)

Sponsor details
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Sponsor type
Hospital/treatment centre

Website
http://www.urousp.hcnet.usp.br

ROR
https://ror.org/03se9eg94

Funder(s)

Funder type
University/education

Funder Name
University of São Paulo (Brazil) - School of Medicine, Division of Urology

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	01/11/2009		Yes	No

Poster results	01/12/2009	No	No