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DOXAZOSIN FOR TREATING VOIDING DYSFUNCTION IN MEN WITH PARKINSON´S DISEASE

Hypothesis / aims of study

Lower urinary tract dysfunction is an important cause of morbidity and reduced quality of life in patients with Parkinson's disease (PD). To our knowledge, this is the first prospective study investigating the symptomatic and urodynamic effects of doxazosin in the treatment of lower urinary tract symptoms (LUTS) in patients with Parkinson's disease.

Study design, materials and methods

After ethical committee approval of the study protocol and patient informed consent was obtained, 30 men with Parkinson's disease and LUTS with a mean age of 59.4 ± 7.0 years (range 44 to 73 years) were prospectively evaluated. Neurological dysfunction was assessed using the Unified Parkinson Disease Rating Scale (UPDRS). Urological assessment was performed at baseline and after 8 weeks of treatment with 4 mg/day of extended release doxazosin including symptomatic evaluation with the International Continence Society male short-form questionnaire (ICSmsfQ) and a pressure-flow urodynamic study. We conducted a univariate analysis to investigate whether age, severity of neurological dysfunction, duration of Parkinson`s disease and duration of voiding dysfunction correlate with the outcome of doxazosin treatment.

Results

Compared with baseline, the total ICSmSFq was substantially reduced from 16.8 ± 7.2 to 11.6 ± 7.6 ($p = 0.002$). Both voiding (ICSmaleVS) and incontinence (ICSmaleIS) symptoms were significantly improved, with the voiding symptoms reduced from 6. 9 ± 4.4 to 4.2 ± 3.9 ($p=0.001$) and the incontinence symptoms reduced from 4.6 ± 2.8 to 3.1 ± 2.3 ($p<0.001$). A significant improvement of the peak urinary flow from 10.5 ± 5.8 to 12.0 ± 5.5 ml/s was observed ($p = 0.037$). No other urodynamic parameter was significantly changed including the postvoid residual volume, mean bladder capacity and detrusor pressure at maximum flow. Based on the quality of life question of the ICSmSFq, a significant improvement was observed after 8 weeks of treatment ($p<0.001$). Adverse events, most frequently dizziness were usually mild and transient and led to a discontinuation of doxazosin therapy in one patient and a decrease of the dose to 2 mg/day in another patient. No clinically significant changes in neurological symptoms were observed during the study. The severity of neurological dysfunction was the only parameter that correlated with the outcome of doxazosin treatment, with the more debilitated patients having worse results.

Interpretation of results

Treatment with doxazosin significantly improved urinary symptoms and peak urinary flow in patients with Parkinson's disease and lower urinary tract dysfunction and was well tolerated during a eight-week period. Patients with severe neurological disability are more likely to fail treatment with an alpha-blocker.

Concluding message

Our results show that doxazosin is effective and safe in the treatment of lower urinary symptoms in men with Parkinson`s disease.

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CLINICAL TRIAL REGISTRATION: This clinical trial has not yet been registered in a public clinical trials registry.
HUMAN SUBJECTS: This study was approved by the Ethics committee of the Hospital das Clinicas of the University of Sao Paulo School of Medicine and followed the Declaration of Helsinki Informed consent was obtained from the patients.