

NOCTURNAL POLYURIA IS COMMON IN PATIENTS WITH PARKINSON'S DISEASE WHO REPORT NOCTURIA

Hypothesis / aims of study

Parkinson's Disease (PD) is often associated with "non-motor symptoms", the commonest being nocturia which is reported in up to 60% of patients. Nocturia in PD is poorly understood, and the aim of this study was to evaluate patients reporting nocturia using bladder diaries and urinary symptom and sleep questionnaires.

Study design, materials and methods

In this prospective service evaluation, consecutive patients with Parkinson's disease referred for lower urinary tract symptoms and reporting nocturia (defined as waking one or more times at night to void) were included. Patients underwent a standard evaluation including review of history and examination, bladder scan and prostate evaluation (males). Participants filled out a three-day bladder diary, the Urinary Symptom Profile (USP), International Prostate Symptom Score (IPSS), Qualiveen Short Form (SF-Qualiveen), and Parkinson's Disease Sleep Scale (PDSS) questionnaires.

Results

23 patients (17 males and 6 females; mean age 68.5 years) participated. Mean duration of PD was 10.1 years and mean Hoehn and Yahr stage (PD severity) was 3.0 (range 2-5). All patients reported overactive bladder symptoms and mean duration of symptoms was 9.4 years (range 0.5-63 years). Mean post void residual measured by bladder scan was 88mls (median 45mls, range 0-360mls). Most patients were able to maintain a bladder diary. Mean night-time frequency was 3.3 (range 1-7.3) and mean voided volume at night was 208 ml. Mean 46.9% (range 17.8 to 81.1%) of the entire twenty-four hour urine output was produced at night. Eighteen patients (78.3%) were found to be producing a significant quantity of urine at night compared to day (table 1), having nocturnal polyuria.

Patients with nocturnal polyuria were older and had longer duration and more advanced PD compared to patients without nocturnal polyuria (table1). Four out of five patients with postural hypotension had nocturnal polyuria. Patients with nocturnal polyuria had more severe overactive bladder symptom scores on the USP and IPSS questionnaires, and worse quality of life scores on the SF-Qualiveen. They also restricted their daytime fluid intake (mean 1199 ml, range 700-2083 ml).

Interpretation of results

Nocturia is an important factor affecting sleep quality in patients with PD. Patients with PD were able to successfully maintain a bladder diary, which demonstrated that nocturnal polyuria is common in patients with PD reporting nocturia, and is associated with worse overactive bladder symptoms, quality of life and sleep quality scores. Nocturnal polyuria seems to be related to age, duration and severity of PD and presence of postural hypotension, however a larger study is required to confirm these observations.

Concluding message

Patients with PD are able to successfully maintain a bladder diary. Nocturnal polyuria is common in patients reporting nocturia, and is associated with worse bladder symptoms, quality of life and sleep quality.

Table 1: Correlation of nocturnal urine output with demographic features, bladder diary findings and questionnaire scores. USP: urinary symptom profile, IPSS: International Prostate Symptom Score, PDSS: Parkinson's Disease Sleep Scale

Disclosures

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