Correspondence

Lercanidipine-associated nocturia

Sir,

A 64-year-old man had longstanding essential hypertension without target organ damage and mild benign prostatic hypertrophy treated with alfuzocin 2.5 mg qd and associated with nocturia once a night. He was otherwise healthy and blood pressure was well controlled (125/80 mmHg) by long-term treatment with enalapril (20 mg bid), losartan 50 mg/hydrochlorothiazide 12.5 mg qd, metoprolol 200 mg qd (morning) and amlodipine 10 mg qd (evening). Significant bilateral pitting ankle edema (+2) developed after several months, and no other cause than amlodipine could be found. There were no signs of congestive heart failure and chest X-ray and echocardiography were normal including the absence of left ventricular hypertrophy or diastolic dysfunction. Liver function tests were normal as were urinalysis, thyroid function tests and an assessment of the venous circulation in the legs. Amlodipine was discontinued and exchanged for lercanidipine 10 mg qd each evening. The edema disappeared over 1 week but within days of starting lercanidipine he developed severe nocturia with at least 8 awakenings per night (according to data recorded in the patient’s diary). The patient was not consuming caffeine or alcohol and there was no history of sleep apnea. Physical examination was normal and blood pressure remained well within goal (120/70 mmHg). After 2 months, he was advised to switch lercanidipine to the early morning and the severe nocturia swiftly and completely disappeared (X1/night, as before). When he tried of his own accord to resume evening dosing of lercanidipine after 5 weeks, intractable nocturia reappeared, but vanished again when lercanidipine was taken with breakfast.

Lercanidipine is a 1,4-dihydropyridine (DHP) class calcium channel blocker that is well tolerated. It was found to cause much less peripheral edema than amlodipine: 0.6–9% in most trials compared with 23% for amlodipine. Moreover, switching from a first-generation DHP to lercanidipine reduces the likelihood of developing peripheral edema by at least 50%.1 Other lercanidipine-associated adverse events are mild to moderate, related to vasodilatation and not much different from placebo.2 One cohort trial in ambulatory practice reported polyuria/nocturia in 5–10% of patients using calcium channel blockers (mostly DHPs),3 but it was not reported in other large trials2,4 and we could find no single report of marked nocturia associated with evening administration of lercanidipine. According to the Naranjo adverse drug reactions (ADR) probability scale, the association in this case is probable (8 points, with ≥9 points considered definitive).5

Although it is very rare, severe nocturia associated with lercanidipine should be recognized. Simply switching to morning administration may ameliorate this disturbing adverse effect.

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doi:10.1093/qjmed/hcr017
Advance Access Publication 24 February 2011