

Abstract

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Magnesium therapy for periodic leg movements-related insomnia and restless legs syndrome: an open pilot study.

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BACKGROUND: Periodic limb movements during sleep (PLMS), with or without symptoms of a restless legs syndrome (RLS), may cause sleep disturbances. The pharmacologic treatments of choice are dopaminergic drugs. Their use, however, may be limited due to tolerance development or rebound phenomena.

OBJECTIVE: Anecdotal observations have shown that oral magnesium therapy may ameliorate symptoms in patients with moderate RLS. We report on an open clinical and polysomnographic study in 10 patients (mean age 57 +/- 9 years; 6 men, 4 women) suffering from insomnia related to PLMS (n = 4) or mild-to-moderate RLS (n = 6).

METHODS: Magnesium was administered orally at a dose of 12.4 mmol in the evening over a period of 4-6 weeks.

RESULTS: Following magnesium treatment, PLMS associated with arousals (PLMS-A) decreased significantly (17 +/- 7 vs 7 +/- 7 events per hour of total sleep time, $p < 0.05$). PLMS without arousal were also moderately reduced (PLMS per hour of total sleep time 33 +/- 16 vs 21 +/- 23, $p = 0.07$). Sleep efficiency improved from 75 +/- 12% to 85 +/- 8% ($p < 0.01$). In the group of patients estimating their sleep and/or symptoms of RLS as improved after therapy (n = 7), the effects of magnesium on PLMS and PLMS-A were even more pronounced.

CONCLUSIONS: Our study indicates that magnesium treatment may be a useful alternative therapy in patients with mild or moderate RLS-or PLMS-related insomnia. Further investigations regarding the role of magnesium in the pathophysiology of RLS and placebo-controlled studies need to be performed.

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