

Oral Magnesium; Migraine Prophylaxis

Mahnaz Talebi,¹ Mohamad Goldust²

Madam, a number of experimental studies have implicated the importance of magnesium ion in the pathophysiology of migraine.^{1,2} Magnesium has been also administered for both prophylactic and acute therapy in migraine, but the question of its efficacy has not been studied adequately.^{3,4} So the aim of this study was to evaluate the effects of oral magnesium oxide supplementation associated with routine treatments of migraine seizures. In this clinical trial study, effects of 500 mg/day oral magnesium oxide for migraine prophylaxis and serum magnesium concentration in 77 migrainous adults (case=33, control=44) aged 34.10±9.61 years, were assessed. Significant reduction in migraines, migraine days, headache severity and migraine index in both the groups compared with baseline, were observed. In magnesium oxide group compared with control group, 50% or greater reduction in migraines (P<0.01) and headache severity (P<0.05) were significant. Statistically non-significant decreases in migraine index and migraine days in the magnesium oxide group were reported. Magnesium

supplementation increased significantly (P<0.001) serum magnesium concentration while in control group no difference was seen. Considering that oral oxide magnesium supplementation resulted in positive outcomes in decreasing frequency and severity of migraine seizures without leaving any serious side effects, it seems that magnesium oxide supplementation associated with the routine treatments may be effective especially in patients with low level of serum magnesium.^{5,6}

References

1. Tarighat Esfanjani A, Mahdavi R, Ebrahimi Mameghani M, Talebi M, Niknaiz Z, Sataiyan A. The Effects of Magnesium, L-: Carnitine, and Concurrent Magnesium-L-: Carnitine Supplementation in Migraine Prophylaxis. *Biol Trace Elem Res* 2012; 150: 42-8.
2. Mauskop A. Nonmedication, alternative, and complementary treatments for migraine. *Continuum (Minneap Minn)* 2012; 18: 796-806.
3. Pardutz A, Vecsei L. Should magnesium be given to every migraineur? No. *J Neural Transm* 2012; 119: 581-5.
4. Mauskop A, Varughese J. Why all migraine patients should be treated with magnesium. *J Neural Transm* 2012; 119: 575-9.
5. Qujeq D, Zandemami M, Ahanger AA, Shahbadin ME. Evaluation of intracellular magnesium and calcium concentration in patients with migraine. *Neurosciences (Riyadh)* 2012; 17: 85-6.
6. Kelley NE, Tepper DE. Rescue therapy for acute migraine, part 1: triptans, dihydroergotamine, and magnesium. *Headache* 2012; 52: 114-28.

.....
¹Department of Neurology, ²Medical Student, Student Research Committee, Tabriz University of Medical Sciences, Tabriz, Iran.

Correspondence: Mohamad Goldust. Email: drmgoldust@yahoo.com