□ SHORT COMMUNICATION □

Do the Effects of Long-term Lomerizine Administration Differ with Age?

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Lomerizine belongs to the same class of diphenylpiperazine-type calcium antagonists as flunarizine (1), and is clinically used for oral prophylaxis of migraine in Japan. Previous studies have demonstrated decreases in the frequency of migraine attacks with lomerizine administration over 12 weeks (2, 3) and 33 weeks on average (4). The present study was aimed to clarify whether or not long-term administration of lomerizine is effective for migraine patients with frequent attacks, and whether the efficacy of lomerizine differs with age, sex or migraine type.

We studied patients with migraine who were diagnosed according to the International Classification of Headache Disorders (2nd edition) and who suffered from frequent migraine attacks (>10 attacks/month). Patients suffering from chronic tension-type headache or medication-overuse headache were excluded. All patients received lomerizine 10 or 20 mg/day. Treatment effects were evaluated 6 months after beginning treatment. Efficacy of lomerizine was evaluated according to the percentage of the number of attacks per month in each patient compared to that before treatment.

Subjects comprised 41 patients (6 men, 35 women) with a mean age of 34.9 years (range, 13-59 years). Among the 41 patients, 37 patients experienced migraine without aura, while 4 patients reported migraine with aura. The mean rate of decrease in headache was 55.2% (range, 0-95%), and frequency of headache was more than halved in 29 patients (71%). Lomerizine produced none of the adverse effects seen with flunarizine, such as sedation, weight gain, depression or extrapyramidal symptoms. No correlation was noted between efficacies of lomerizine and either sex or migraine type. Significant negative correlations were noted between age and efficacy of lomerizine ($P=0.003$; Pearson's correlation coefficient) (Fig. 1).

The efficiency of lomerizine was 71% in this study. Previous studies have reported efficiencies of 67% (2) and 47% (3) for lomerizine administered for 12 weeks. Another study of long-term lomerizine administration showed a global utility rating of 71.4% (4). In this study, patients started with

Figure 1. Correlation between lomerizine efficacy and age. Significant negative correlations were noted between age and efficacy of lomerizine ($P=0.003$; Pearson's correlation coefficient).

>10 attacks/month, and the efficacy was judged by decrease in attack frequency. The patients in previous studies had ≥ 2 attacks in 4 weeks, and efficacies were judged using global assessments of frequency of attacks, severity, aura and accompanying symptoms. The efficacy of lomerizine for long-term prophylaxis thus appears stable, although differences between studies were seen in attack frequency and evaluation criteria.

The present study showed that lomerizine was more effective for younger patients than for older patients. The response to flunarizine treatment is reportedly most favorable in younger patients (5). The favorable reaction of younger patients might be a distinctive characteristic of diphenylpiperazine-type calcium antagonists. Large-scale examinations may be warranted to clarify this aspect.

Lomerizine has not displayed any serious adverse effects in previous studies, and no changes in blood pressure, heart rate or plasma prolactin levels have been identified with long-term administration. This study confirmed the safety of lomerizine.

This small open study suggests that lomerizine is effective for long-term prophylaxis against frequent migraine, and it may be more effective for younger patients.

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