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Effect of Erenumab on Absenteeism and Presenteeism in Patients with Episodic and Chronic Migraine in Actual Clinical Practice in Japan: A Retrospective Observational Study

医療法人 聖光会
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COI Disclosure
There is no COI relationship with any company related to the presentation that should be disclosed.

Abstract

We investigated the effect of erenumab treatment for migraine on absenteeism and presenteeism among the patients. This retrospective observational study included 75 patients (53 in the EM group and 22 in the CM group) ; they were treated with erenumab at our hospital. Absenteeism was evaluated using item 1 of the Migraine Disability Assessment Scale (MIDAS), and presenteeism, using item 2. Presenteeism improved significantly from 11.25 (standard deviation, 10.48) days in the EM group and 30.55 (20.37) days in the CM group at the baseline to 2.17 (3.49) and 7.86 (9.17) days at the first evaluation, and to 1.68 (2.81) and 4.23 (5.39) days at the second evaluation, respectively. Erenumab was found to be effective in improving presenteeism in migraine patients. No serious adverse events were observed during the study period.

Introduction

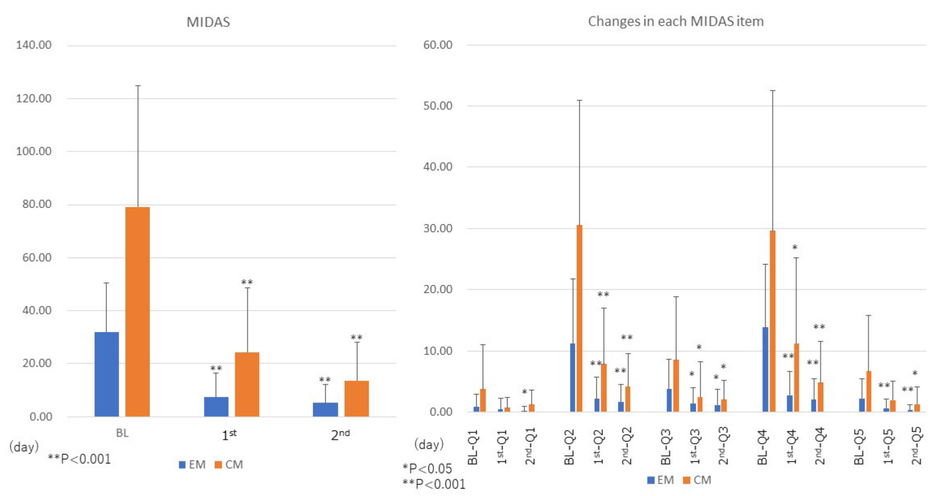
- Migraine is a chronic neurological disorder that recurs paroxysmally and is highly prevalent among people 11–49 years of age. Thus, it has a significant impact on the overall productivity of society. In Japan, migraines were estimated to cause an annual economic loss of approximately 21.3 billion US$/year in Japan (2021), drawing attention to the effects of migraine on absenteeism and presenteeism.
- We conducted a retrospective study to investigate the effects of erenumab treatment on absenteeism and presenteeism in patients with episodic migraine (EM) and chronic migraine (CM) in actual clinical practice in Japan. We examined changes in the Migraine Disability Assessment Scale (MIDAS) total score (items 1 and 2) from three months before treatment to the first six months of treatment with erenumab.

Material and Methods

- Of the 167 patients at our hospital who received at least one dose of erenumab 70 mg subcutaneous injection from August 12, 2021, to December 31, 2022, 75 patients (53 EM, 22 CM) who continued to visit our hospital at least six times within 4–5 weeks and whose headache diary and MIDAS were confirmed from 3 months prior to 6 months after treatment initiation were included in this retrospective observational study. The primary endpoint was the MIDAS score. The secondary endpoints were mean changes from baseline of monthly migraine day (MMD).

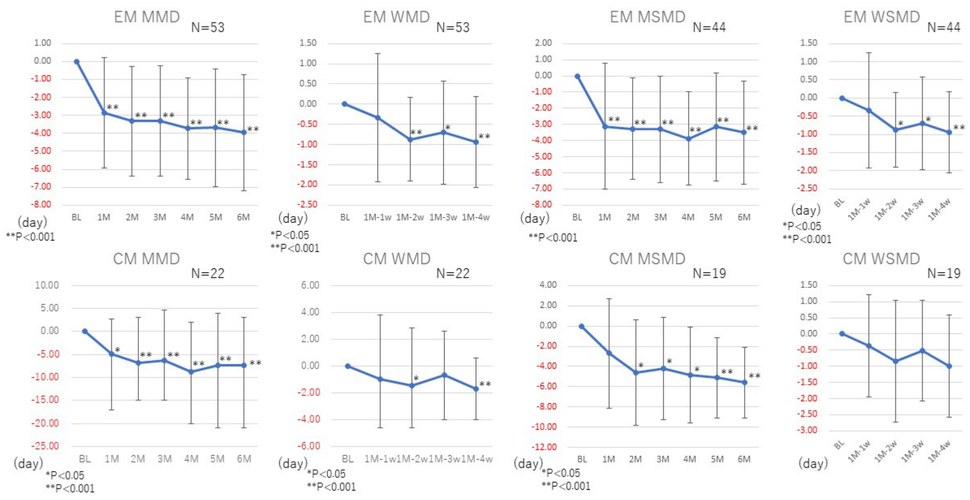
Result

Figure1. Change of MIDAS



EM : episodic migraine, CM : chronic migraine, BL : base line, MIDAS : Migraine Disability Assessment

Figure 2. Mean change in MMD, WMD, MSMD, and WSMD from baseline



EM : episodic migraine, CM : chronic migraine, BL: base line, MMD : monthly migraine days, WMD : weekly migraine days, MSMD : monthly acute migraine-specific medication treatment days, WSMD : weekly acute migraine-specific medication treatment days,

- MIDAS showed significant improvement in both the EM and CM groups at the first and second evaluation compared with baseline ($p<0.001$) (Fig.1 Left).
- Absenteeism was evaluated using Item 1 of the MIDAS (absenteeism score) and presenteeism using Item 2 (presenteeism score). The presenteeism score decreased significantly from 11.25 (standard deviation (SD), 10.48) and 30.55 (SD, 20.37) days in the EM and CM groups at baseline to 2.17 (SD, 3.49) and 7.86 (SD, 9.17) days at the first evaluation, and 1.68 (SD, 2.81) and 4.23 (SD, 5.39) days at the second evaluation, respectively ($p<0.001$) (Fig.1 Right).
- The mean change from baseline to the secondary endpoint of MMD was significantly lower in both the EM and CM groups at the first month of treatment than that at baseline (EM, $p<0.01$) (CM, $p=0.01$) (Fig.2).
- No serious adverse events (AEs) were observed during erenumab treatment.

Discussion

- To assess patient perception of treatment efficacy, assessment measures of patient-reported migraine impact are essential. The MIDAS focuses on a single indicator (disability) and evaluates its impact as a static measure by scoring the number of days of lost work/study, housework, family, and social activities limited by headaches in the past three months in response to five questions. The MIDAS is a direct and intuitive way to evaluate absenteeism and presenteeism.
- It has been demonstrated that presenteeism while working with an illness leads to more lost working time than absenteeism. In the present study, erenumab consistently and significantly improved presenteeism in both the EM and CM groups. Patients with migraines are often of working age, and erenumab should be more widely and continuously used in patients who need it to prevent economic losses at both an individual and societal level.
- Among the AEs, constipation was observed in 22.67% of the patients; pruritus (12.00%) and redness (1.33%) were observed as injection site reactions. Constipation was mild in all cases and was observed after the first administration. All cases of constipation were relieved after 1 or 2 months and a temporary increase in laxative dose. Injection site reactions were often mildly pruritic and occurred for one or two days after the second dose but resolved with the application of external agents in all cases. No patients discontinued erenumab treatment due to AEs, including constipation.

Conclusion

- Erenumab was found to be effective for improving presenteeism in patients with migraines in actual clinical practice in Japan.
- No serious AEs were observed during this study.

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