Efficacy of Lamotrigine in the Treatment of Migraine with Aura: A Retrospective Observational Study

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INTRODUCTION

- Migraine with aura affects about one-third of individuals with migraine over a year.[1]
- Lamotrigine may reduce the frequency and duration of aura symptoms in some patients[2], although there is insufficient evidence supporting a preventive effect on headache[3,4]

AIM

- To evaluate the efficacy of lamotrigine in the treatment of migraine with aura in a tertiary care headache population.

METHODS

- Retrospective data from clinic letters of patients seen in a tertiary headache centre from January 2015 to January 2025.
- Patients with a diagnosis of migraine with aura according to International Classification of Headache Disorders 3/3beta (ICHD-3-3/beta)[5,6], and who were receiving lamotrigine, were included.
- Treatment response assessed in terms of patient reported improvement in severity or frequency of headache. Improvement of pain related to other concurrent headache or facial pain disorders was not included.
- Patients on at least 50mg twice a day dosing were considered to have received adequate dosage to assess therapeutic effect.
- The analysis included patients with all aura types, including visual, motor, sensory and brainstem aura.
- Data on side effects to lamotrigine as well as maximum tolerated dosage were also obtained.
- Data were collated and analysed with Excel.

RESULTS

- Patients (*n* = 52) were identified as having received treatment with lamotrigine for migraine with aura.
- 83% were women, 90% had chronic migraine
- The median age was 47 (IQR) years old
- Visual aura was the most common subtype of aura (77%), followed by sensory aura (35%), motor aura (15%) and brainstem aura (3.8%).
- Of patients, 27% reported side effects and 23% ceased lamotrigine due to these side effects.
- Table 1 shows the side effects reported amongst the cohort.
- Of the remaining 40 patients who tolerated lamotrigine, 24 patients received over 50mg twice daily dosing. Amongst these 24 patients, only 1 (4%) reported treatment efficacy specifically for their migraine headache, representing only 2% of the total cohort of 52 patients.

Table 1:

SIDE EFFECT	PERCENTAGE
RASH	8% (4/52)
WORSENING HEADACHE	6% (3/52)
MOOD CHANGE	4% (2/52)
NAUSEA	2% (1/52)
COGNITIVE DIFFICULTIES	2% (1/52)
REFLUX	2% (1/52)
INSOMNIA	2% (1/52)
SOMNOLENCE	2% (1/52)
UNSTEADINESS	2% (1/52)
MOVEMENT DISORDER	2% (1/52)
HYPERTENSION	2% (1/52)

CONCLUSIONS

- Lamotrigine demonstrated limited effectiveness in headache prevention in migraine with aura in our cohort; only a single patient reported improvement in migraine headache
- Close to a quarter of patients ceased lamotrigine treatment due to side effects.

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