

Chronic paroxysmal hemicrania responsive to lamotrigine

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ABSTRACT

This report details a 45-year-old woman who has been suffering right-sided temporal and orbital headache attacks during last five years. The pain is characteristically associated with ipsilateral lacrimation, ptosis and rhinorrhoea. The frequency and duration of pain increased dramatically within last two years. Detailed neurological, physical and clinical examinations as well as routine blood tests revealed no abnormality. Magnetic resonance imaging of brain was normal. The patient was clinically diagnosed as chronic paroxysmal hemicrania and initially treated with indomethacin. Due to appearance of epigastric pains indomethacin treatment was replaced with lamotrigine which successfully resolved the symptoms.

KEY WORDS: Paroxysmal Hemicrania, Trigeminal Autonomic Cephalgias, Indomethacin, Lamotrigine.

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INTRODUCTION

The trigeminal autonomic cephalalgias (TACs) are a group of primary headache disorders characterized by unilateral headache which is associate with ipsilateral cranial autonomic features.¹ The TACs include cluster headache (CH), paroxysmal hemicrania (PH), and short-lasting unilateral neuralgiaform headache attacks with conjunctival injection and tearing (SUNCT)??.² PH is a relatively rare and under-recognized primary headache disorder characterized by a strictly unilateral, short-lasting, severe neuralgiaform headache attacks with possible exacerbations. Majority of these patients response to well indomethacin therapy and this is one of the diagnostic criteria.³

Gastrointestinal side effects are the most important limitation of long period usage of indomethacin. For these reasons a well-tolerated drugs have been proposed for the acute and preventive treatment. In the present case, we report the first patient with CPH who were effectively treated with lamotrigine because of serious gastric side effects of indomethacin.

CASE REPORT

A 45-year-old woman was referred with a 5-year history of headache. She described excruciating, right-sided temporal and orbital headache attacks which are usually associated with ipsilateral lacrimation, ptosis and rhinorrhoea. During the first three years her symptoms were lasting for only 10 minutes and rarely occurring more than once a day with remission periods of three months but, in the last 2-year periods, she experienced pain attacks which are lasting for 15-20 minutes with a frequency of up to 10 episodes per day and they start to occur almost daily with remission periods of less than 10 days. There were no abnormal signs on physical and neurological examinations. Routine blood tests and magnetic resonance imaging of the brain were unremarkable. On her history, she had two renal colic attacks due to kidney stone. Based on her history and exclusion of other

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possible causes, CPH was diagnosed and 75 mg/day indomethacin and proton pump inhibitors were administered upon the diagnosis. Her symptoms resolved and totally disappeared after two days of therapy. During two months follow up, she developed severe epigastric pain and indomethacin has been withdrawn but after that her symptoms aggravated. Because of further pain episodes, lamotrigine was started on with very slow titration to 200 mg/day and her symptoms completely resolved in two months and then the initial dose of it gradually decreased. Now, she is under remission with 50 mg/day lamotrigine and did not have any attacks during the last three months.

DISCUSSION

PH is a rare syndrome that responds dramatically to indomethacin treatment. Unilateral, relatively brief, severe attacks of pain associated with ipsilateral cranial autonomic features are typical symptoms of these patients.⁴ Indomethacin is the first line therapy for the acute and chronic treatment of CPH.⁵ The resolution of the headache with this is prompt, usually occurring within one or two days of initiating indomethacin. The typical dose ranges of indomethacin from 25 to 100 mg daily but it may vary between 12.5 and 300 mg daily in these doses, the side effects of it such as, alterations in renal functions, cardiovascular dysfunction, hepatic injury, platelet inhibition and gastrointestinal complaints become overt. Approximately, 25% of treated patients have severe adverse gastrointestinal effects as in our case.⁶ On discontinuation, pain attacks usually appear within 12 hours to 2 weeks.

Therefore, in patients with CPH, long-term alternative therapies are necessary for indomethacin intolerant patients. According to the current literature, topiramate is effective in those patients who are intolerant to indomethacin. Indeed, the drug has also been proved to be effective as a preventive treatment of migraine, hypnic headache, CH and SUNCT but the exact mechanism of topiramate in prophylactic treatment for various headache syndromes are not well known.^{7,8} Firstly, we thought to choose topiramate which is very effective in patients with CPH. However, alternative treatment was preferred because in the patient's medical history, there were renal colic attacks due to kidney stone story which is one of side effects of this drug.

In a recent open label study, lamotrigine had a moderate to good effect in 68% SUNCT patients. Moreover, lamotrigine given in another open label manner at doses up to 300 mg daily was reported as highly

efficacious in 10 patients, although it was ineffective in four patients.⁹ PH and SUNCT, both disorders included in the same umbrella term of TACs. Therefore, we think that one of the newer antiepileptic drugs, lamotrigine, may be effective as a preventive treatment in a patient with CPH.

We started on lamotrigine with very slow titration to 100 mg twice daily, with complete pain relief after two months of initiating the effective dose without side effects. Thereafter we gradually reduced it to 50 mg daily. Three months follow-up, she had no more headache attacks. Lamotrigine is an antiepileptic drug thought to act by stabilizing the neuronal sodium channel but the mechanism of action in CPH is unclear.

Consequently, we showed that when topiramate can not be used because of some reasons such as side effects or intolerance in patients, lamotrigine can be preferred according to the evidences of our study which gives very effective results.

CONCLUSION

According to our observations, lamotrigine could be an interesting alternative option in patients with CPH who have contraindications or intolerance to indomethacin treatment. However, the result only shown by the patient in the present study needs to be confirmed by larger controlled clinical trials and other cases.

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