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Case study

Complications of Lamotrigine in Temporal Lobe Epilepsy: A Clinical Image

Running Title: Lamotrigine in Temporal Lobe Epilepsy

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Introduction

Lamotrigine carries side effects of nausea or vomiting, loose bowels, irritability, visual disturbances, headaches, sleepiness or insomnia, dizziness, and ataxia. Still, the most severe and life-threatening adverse effects of Lamotrigine are the Stevens-Johnson syndrome (SJS), toxic epidermal necrolysis (TEN), drug reaction with eosinophilia, and systemic symptoms (DRESS) (1, 2). If these severe side effects occur, the drug should be discontinued immediately. According to previous studies, changing the brand name of Lamotrigine has caused skin problems in some patients with convulsions who were controlled by this drug before. It should be noted that the lack of appropriate quality control of Lamotrigine causes ineffectiveness and can lead to serious side effects (2).

Keywords: Temporal Lobe Epilepsy, Lamotrigine, Stevens-Johnson Syndrome

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Case report

A 31-year-old married woman from the southeastern region of Iran, residing in the center of Iran, with generalized skin lesions, mostly on her hands, was referred to a psychiatrist. Painful rash that spreads and blisters resembling bleeding, watery, progressive, severe itching, and dermis were isolated from the epidermis. After obtaining a history, it was noticed that the skin lesions did not appear after contact with any allergens or detergents. In addition, there was a cause-and-effect relationship with the use of Lamotrigine, which was exacerbated by starting and increasing the drug dose. The lesions were reduced or disappeared by decreasing the dose of the drug. No other underlying disease was found. Initially, she was referred to an experiential therapist for specific behavioral conditions and received advice such as prayer, spells, and exorcism, which were ineffective. She described things like hearing a voice and sudden crying, seeing small people, and becoming confused and aggressive. She suffered from sleepwalking, functional neurological symptom disorder (FNSD), visual and auditory hallucinations, and aura. An electroencephalogram (EEG) showed a temporal lobe arrhythmia. Based on EEG and her symptoms, temporal lobe epilepsy was diagnosed. Olanzapine was prescribed because the patient had lost appetite and subsequently lost weight due to depression and behavioral problems.

She was initiated on an antiepileptic drug (AED) treatment with sodium valproate, but the seizures were not controlled. Therefore, Lamotrigine up to 100 mg/day and folic acid (1mg/day) were prescribed, and seizure attacks were controlled for six years without serious complications. Following a change in the patient's Lamotrigine, she suffered severe skin lesions **(Figure 1 A)**. At first, it was considered a local sensitivity to the bracelet. Despite discarding the bracelet, the skin lesions did not heal and got worse. Since SJS was the possible diagnosis, Lamotrigine was gradually tapered and discontinued. Despite the financial problem, levetiracetam (500 mg/day), doxepin (10 mg/day), famotidine (40 mg/day), and Olanzapine (10 mg/day) were prescribed so that her seizures were partially controlled and SJS improved (**Figure 1 B**). Moreover, tablets Carbamazepine, topiramate, and then Lacosamide were prescribed, but the seizure attack was not controlled.

After taking a history and lacking contact with detergents, it was found that skin lesions were not related to such substances.

Although convulsions signs such as the form of hallucinations, perceptual distortion, staring, automatism, lip smacking, confusion, self-injurious behaviors, and aggression, remarkable which could not be ameliorated by other anticonvulsant drugs, could be controlled by Lamotrigine, by using that skin complication would be appeared.

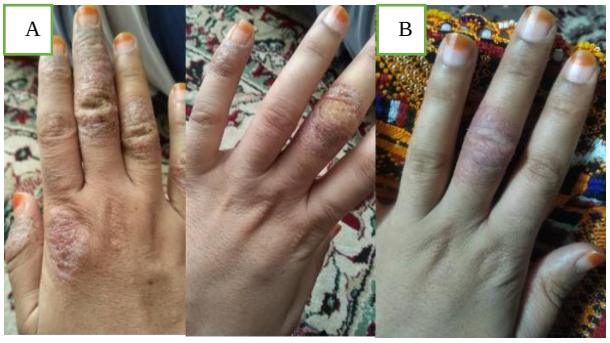

Figure 1. Stevens-Johnson syndrome emerged when the Lamotrigine was changed (A). After Lamotrigine discontinuation and replacement Levetiracetam.

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Authors' contributions: RB visited the patient and collected the data. FZ and FS wrote the primary draft of the manuscript. FS and RB revised and finalized the manuscript. All authors read and approved the final version of the manuscript.

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