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Lamotrigine induced Stevens-Johnson Syndrome in an Epileptic Patient on Sodium Valproate and Clobazam

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ABSTRACT

A 20 year old male with epilepsy who developed Stevens Johnson Syndrome following treatment with a combination of Lamotrigine, Sodium Valproate and Clobazam. It is important to identify such adverse drug reactions and report them.

Keywords: Stevens Johnson Syndrome; Lamotrigine; Sodium Valproate

INTRODUCTION

Lamotrigine is a triazine compound chemically unrelated to other antiepileptic drugs initially developed as antifolate agent.[1] Lamotrigine is relatively a novel antiepileptic drug for treating partial and generalised seizures[2,3] by acting on voltage sensitive sodium channels. It stabilises neuronal membranes and inhibits the release of excitatory neurotransmitters like glutamate or aspartate.[4]

Due to its limited use in Indian population, few adverse reactions related to it are reported[5] as compared to western population where it is considered as a common drug to cause serious reaction.[6] Commonly observed adverse effects associated with it are dizziness, ataxia, somnolence, headache, diplopia, blurred vision, nausea, rash[7] besides Steven Johnson syndrome and DIC which is rarely reported.

Stevens Johnson syndrome and Toxic epidermal necrolysis are the most severe cutaneous adverse reactions to medications, characterised by detachment of dead epidermis and erosion of mucus membrane.[8]

A case of Lamotrigine induced Stevens Johnson syndrome in an epileptic patient is presented.

CASE REPORT

A 20-year-old adult male reported in emergency of associated hospitals of GMC, Anantnag with generalised rash and fever. Patient a known case of epilepsy had been on sodium valproate 600 mg and clobazam 5 mg for last few years. No adverse reaction were reported for any of the drugs by the patient. Because of inadequate seizure control Lamotrigine 100 mg twice daily was added to previous regimen.

Two weeks following the new regimen consisting of lamotrigine 100 mg twice daily, sodium valproate 600 mg and clobazam 5 mg, patient developed fever and chills with rashes. Examination revealed ulcers in the oral cavity with limited opening of mouth due to tender and erythematous encrustation all over lips. Diffuse erythematous rash and blisters was also found over face, neck, trunk and lower extremities.

Based on history/clinical presentation a diagnosis of lamotrigine associated stevens Johnson syndrome was made. So, the drug was immediately discontinued. After admission patient was put in intravenous steroids and anti-allergic. Oral lesions were treated with topical anaesthetics, antibiotics and anti-fungal. Carbosoft AF lotion was prescribed for blisters of the body.

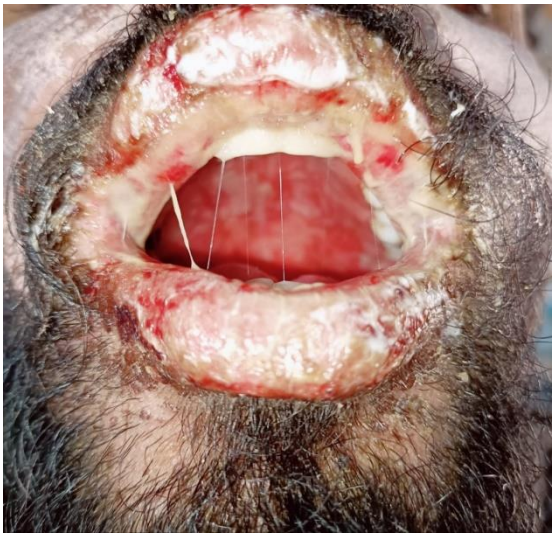

Figure 1: Erythematous encrustation all over lips (Photograph is shared after taking consent from the patient)

DISCUSSION

Stevens Johnson Syndrome is a rare, life threatening condition. It is a severe blistering mucocutaneous disease. It is a less severe variant of toxic epidermal necrolysis. The term Stevens Johnson Syndrome describes cases with blisters developing on target lesions, dusky or purpuric macules in which mucosal involvement is significant and total body surface area blistering and eventual detachment in <10% of cases. The term Stevens Johnson syndrome/ toxic epidermal necrolysis overlap is used to describe cases with 10-30% detachment and TEN is used to describe cases with >30% detachment. Other blistering eruptions like erythema multiforme and mycoplasma infection may be confused with Stevens Johnson Syndrome/toxic epidermal necrolysis.

Lamotrigine is a newer anticonvulsant having carbamazepine like action profile. It causes prolongation of sodium channel inhibition thus stabilizing the presynaptic membrane and preventing release of excitatory neurotransmitters, mainly glutamate and aspartate.

Sodium valproate is an anticonvulsant which acts by multiple mechanisms including prolongation of sodium channel inactivation. Sodium valproate inhibits glucuronidation of lamotrigine and doubles its blood level, but valproate levels are lowered by lamotrigine. This has been reported previously by few studies.

In our case concomitant use of sodium valproate and lamotrigine resulted in lamotrigine induced Stevens Johnson syndrome. Since the patient was also on clobazam 5 mg and FDA has warned of serious skin reaction with clobazam. So there is need to differentiate lesions of SJS from immunobullous lesions.

CONCLUSION

SJS is life threatening condition seen with many drugs which requires immediate interventions and management. Concomitant use of sodium valproate and lamotrigine in patient of epilepsy should be supervised to avoid ADR related to combination of these drugs.

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