STEVEN JOHNSON SYNDROME INDUCED BY CARBAMAZEPINE TREATMENT IN AN EPILEPTIC PATIENT – A CASE REPORT

G. Sowjanya¹, E. Raja Sree², S. Disharani¹, M. Neeraja¹, Y. Lavanya¹, M. Niranjan babu¹
¹Seven Hills College of Pharmacy, Tirupati, Andhra Pradesh – 517561
²Bojjam Narasimulu Pharmacy College for Women, Saidabad, Hyderabad - 500059

Abstract
Objectives: Carbamazepine is most commonly used for the treatment of seizure disorders, neuropathic pain and bipolar disorders. It is associated with adverse effects such as nausea, vomiting, drowsiness, dizziness, head ache, impairment in motor coordination, aplastic anaemia, agranucytosis. Rarely life threatening cutaneous reaction such as stevens-johnson syndrome (SJS) or toxic epidermal necrolysis (TEN) due to carbamazepine therapy are more common in people with human leukocyte antigen allele HLA-B*1502. Methodology: We report a case of SJS due to carbamazepine therapy in a patient with epilepsy. Results: A 36 years old female patient from rural area was admitted in the dermatology ward in a tertiary care hospital with a chief complaints of fever, blisters, skin peeling, red eyes, painful skin, burning sensation, erythema of lips, throat pain and difficulty of swallowing for 4 days. She had a past medication history of early two month clinical course of carbamazepine for seizures. Conclusion: We highlight the importance of early diagnosis of this cutaneous adverse reaction may help in adjusting the further therapy so as to avoid the complications.

Key words: Carbamazepine, epilepsy, steven johnson syndrome, cutaneous adverse drug reaction

Corresponding author:
Dr. Y. Lavanya,
Professor,
Seven Hills College of Pharmacy,
Tirupati, Andhra Pradesh – 517561.
Email: ylavanya.balaji@gmail.com

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INTRODUCTION:
Stevens Johnson Syndrome is a rare but serious cutaneous adverse drug reaction [1]. It is believed as a type IV hypersensitivity reaction in which drug or metabolite stimulate cytotoxic T cells and helper T cells to initiate autoimmune reactions [2]. Previous reports suggested that SJS is more common in people with human leukocyte antigen allele (HLA-B*1502) [3]. SJS are usually caused by certain medications such as lamotrigine, carbamazepine, sodium valproate, phenytoin, allopurinol, sulfonamides and nevirapine [4,5]. Aromatic anticonvulsants commonly cause SJS [6,7]. Among which carbamazepine is frequently associated in adverse drug cutaneous reactions [8,9].

Carbamazepine is frequently using in the management of epilepsy, trigeminal neuralgia, bipolar disorder [10]. It is associated with adverse effects such as nausea, vomiting, drowsiness, dizziness, headache, impairment in motor coordination, aplastic anaemia, agranucytosis [11]. But it is also induces life threatening SJS which is characterized by fever, sore throat, blisters over the mouth, lips, skin peeling, red eyes, painful skin, burning sensation [12]. It is quite difficult to prevent SJS because drug adverse reactions occur in an unpredictable manner but early diagnosis can change the course of this disease. We hereby present a case of SJS to carbamazepine therapy in an epileptic patient.

CASE REPORT:
A 36 years old female patient from rural area of Putalapitu village, Chittor district, Andhra Pradesh was admitted in the dermatology ward in a tertiary care hospital, Sri Venkateswara Institute of Medical Sciences, Tirupati with a chief complaints of fever, blisters, skin peeling, red eyes, painful skin, burning sensation, erythema of lips, throat pain and difficulty of swallowing for 4 days. She was a post operative case of subclavian artery by the right cervical ribs due to the presence of dry gangrene in the tip of index finger of right hand. She had a past medication history of early carbamazepine therapy with the dose of 100 mg twice daily since two months before hospitalization. She reported to hospital with the clinical features of fever, blisters, skin peeling, red eyes, painful skin, burning sensation, erythema of lips, throat pain, difficulty of swallowing for 4 days and hematologic involvement with thrombocytopenia. The hemorrhagic erosive lesions are present on mucosal surface of blisters. SJS/toxic epidermal necrolysis (TEN) overlap is characterized by widespread atypical target lesions and maculae. The erosions or blisters involve 10-30% of the body surface. In TEN syndrome, the body surface is covered with erosions or blisters in more than 30% and widespread target lesions and maculae are present. The immunopathological differences between autoimmunological blister disease and SJS syndrome concern deposits of immunoglobulins and complement. In pemphigus, deposits are located in intercellular mucosal vessels whereas IgG and C3 in autoimmunological blister disease whereas IgM and C3 in SJS [13].

In our case, the patient was immediately admitted to the hospital after the clinical features. Advised the patient to stop carbamazepine. She was prescribed with topical and systemic corticosteroids after histological and clinical diagnosis. There is considerable debate whether to treat SJS with IV steroids because they may increase the risk of superinfection and delay healing [16]. Some studies revealed good therapeutic effect after treatment of SJS with systemic steroids along with intravenous immunoglobulin therapy [17]. On the other hand, some studies reported that early treatment
with high doses of systemic steroids ensured a rapid recovery, mainly in SJS patients where the skin destruction was not too extensive and could be reversed by anti-inflammatory effects of steroids [18]. IV steroids are probably not beneficial in toxic epidermal necrolysis, which is a more severe cutaneous manifestation of SJS [19]. There are only a few reports on the use of IVIG in severe cutaneous adverse reactions.

CONCLUSION:
Carbamazepine is a drug administered not only to the patients suffering from epilepsy, but also for pain management. So its use is increasing day-by-day. It is very difficult to predict the risk of SJS or TEN manifestation of SJS and toxic epidermal necrolysis, which is a more severe cutaneous reaction. IV steroids are probably not beneficial in toxic epidermal necrolysis: A pathological review with high doses of systemic steroids ensured a rapid recovery, mainly in SJS patients where the skin destruction was not too extensive and could be reversed by anti-inflammatory effects of steroids [18]. IV steroids are probably not beneficial in toxic epidermal necrolysis, which is a more severe cutaneous manifestation of SJS [19]. There are only a few reports on the use of IVIG in severe cutaneous adverse reactions.

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