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Case Report

Stevens-Johnson syndrome induced by phenytoin: a case report

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ABSTRACT

Stevens-Johnson syndrome (SJS) and Toxic epidermal necrolysis (TEN) are rare (one to two per 10,00,00 population per year) but life threatening adverse drug reactions. Antiepileptic drugs-induced Stevens-Johnson syndrome (SJS) is a life-threatening severe cutaneous adverse reaction, amongst anti-epileptics; carbamazepine and phenytoin are the major culprits. We report here a case of SJS due to phenytoin (CTC vs 2 Grade 3).

Keywords: ADR, Anti-epileptics, Naranjo scale, Phenytoin, SJS

INTRODUCTION

Adverse drug reactions (ADRs) have been reported to be responsible for 0.3 to 7 percent of deaths amongst hospitalized patients. Stevens Johnson syndrome (SJS) and Toxic Epidermal Necrolysis (TEN) are life threatening ADRs and a leading cause of mortality. Drugs at high risk of causing SJS are anti-epileptics, antimicrobials (sulfonamides, penicillins and cephalosporins) and non- steroidal anti-inflammatory drugs (NSAIDs).[1] Carbamazepine (CBZ) and phenytoin (PHT) are among the most common causes of antiepileptic drugs (AEDs)-induced cutaneous adverse reactions.[2] Recently, a significant association of PHT-induced SJS/TEN with HLA-B*1502 allele had been observed in Thailand and Taiwan populations.[3] We report here a fatal case of Stevens-Johnson syndrome due to phenytoin.

CASE REPORT

A 30 year old female patient, presented with chief complaints of Fever with chills since 15days. From last 2 days back, she developed rashes all over the body and progressed over the entire body including oral cavity with redness of tongue and lips (Figure 1, Figure 2, Figure 3 and Figure 4). There was a history of easy fatigability, seizure disorder, tonic clonic seizure since 3 months. She is on medication with Phengo 300 (Phenytoin sodium) and Phensobar-50 (phenobarbitone and phenytoin). She was given paracetamol-650, cefoxime for the fever for 5 days. There was no other significant past history or any

known drug allergy. On examination, patient general condition was fair, conscious and oriented. Vitals were stable. The patients were referred to dermatology department where she was diagnosed as drug induced skin rashes and oral erosions by the drug phenytoin (CTC vs2 Grade 3). Patient was started on Avil injection (Pheniramine maleate), Efcorin injection (Hydrocortisone sodium), Calosoft lotion, Betadine mouthwash, Vaseline lip lotion, and oral paste, IV fluids. The patient symptoms and skin lesions were observed to be reduced and after the patient discharged.

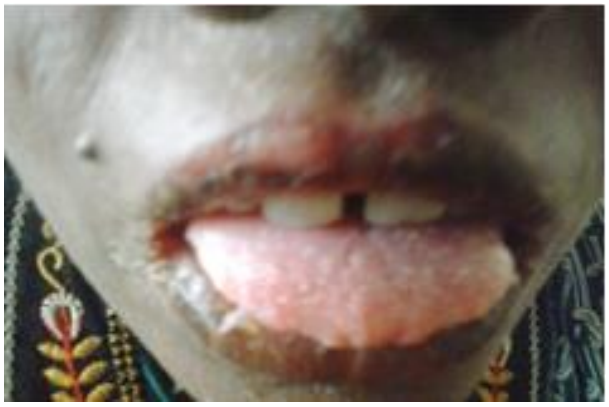

Figure 1: Erosions of lips and tongue.

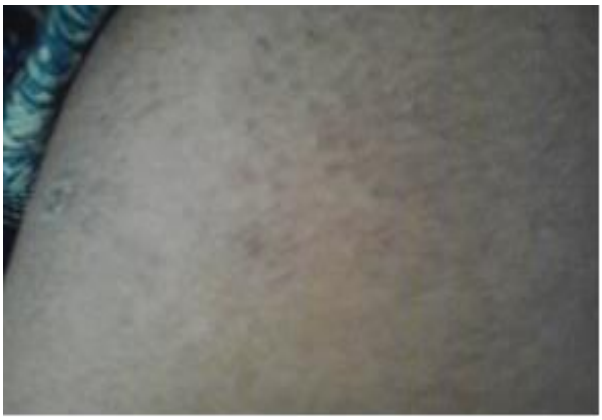

Figure 2: Skin rashes.

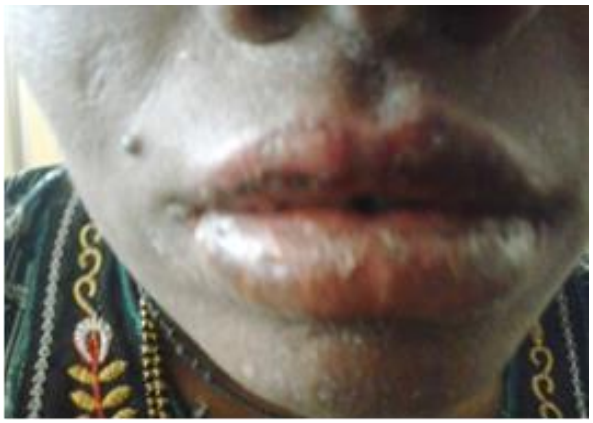

Figure 3: Oral erosions.

Figure 4: Lip erosions.

DISCUSSION

SJS and TEN are characterized by rapidly expanding blistering exanthema of purpuric macules and target-like lesions accompanied by mucosal involvement and skin detachment, with a mortality rate that can reach up to 40%.[4,5] The diagnostic criteria of SJS/TEN are based on the clinical morphology. SJS is defined as skin detachment of less than 10% of body surface area, an overlap of SJS/TEN is defined as skin detachment of 10-30% and TEN is defined as detachment of greater than 30%.[4] Diagnosis is based on clinical presentation such as erythematous macules, hemorrhagic erosions along with histological analysis of skin biopsy showing typical full-thickness epidermal necrolysis due to extensive keratinocyte apoptosis. Drugs are the most common cause of SJS. It is of paramount importance to identify the medication causing SJS and withdraw it immediately. All precautions should be taken to prevent recurrence from inadvertent re-challenge. The following drugs are at high risk of causing SJS: carbamazepine, lamotrigine, nevirapine, NSAIDs, phenytoin, phenobarbitone, sulphadiazine, sulfapyridine, sulfamethoxazole, sulfasalazine.[6,7] Amongst anti-epileptics, phenytoin and carbamazepine have been reported to be the most common cause.[8] Hence, before prescribing these medicines, detailed history of any past drug allergy, family history of drug allergy or death in the family due to a drug should be thoroughly investigated. Varying incidences of SJS (13.37% and 3.33%) with phenytoin have been reported by various authors.[7,9] Lobao B et al, reported a similar case where a patient of meningioma was given phenytoin for seizure prophylaxis and developed TEN. Intravenous fluids, systemic steroids and infection control measures were undertaken and patient recovered.[10] Schmidt D et al, reported a case of epileptic patient who developed fatal TEN following re- exposure to phenytoin.[11] Supportive management is the mainstay of treatment. It involves clinical suspicion with prompt identification and withdrawal of the culprit drug.

Causality analysis using Naranjo's scale showed that phenytoin is the probable cause of the adverse reaction in this case (score=6). To conclude, in order to avoid

morbidity and mortality associated with SJS and TEN; it is of utmost significance to be vigilant while giving drugs known to cause SJS, early diagnosis, identification of the culprit drug, its prompt withdrawal and specialized supportive care. Since phenytoin has been reported to cause SJS and TEN, its use for seizure prophylaxis needs to be reconsidered in view of safer alternatives available.

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