A Case of Phenytoin induced Steven Johnson Syndrome

Drug induced Steven Johnson Syndrome

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***Abstract*—We are reporting a case of Steven Johnson Syndrome brought on by a medication, which manifested as a facial rash and blisters. When someone is genetically susceptible, Stevens-Johnson syndrome, a rare but severe delayed-type hypersensitivity reaction, manifests as widespread blistering, ulceration, and necrosis of the skin and mucosa and causes major morbidity and mortality. With the use of corticosteroids, nutritional assistance, and wound care, it was conservatively treated. The patient made a full and satisfactory recovery.**

***Index Terms*—Phenytoin, Steven Johnson Syndrome, Toxic Epidermolysis Necrosis, Hypersensitivity, Case Report.**

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1. INTRODUCTION

Stevens-Johnson syndrome (SJS) is a rare, serious disorder of the skin and mucous membranes. It's usually a reaction to medication that starts with flu-like symptoms, followed by a painful rash and blisters which typically spreads. Then the top layer of affected skin dies, sheds and begins to heal after several days. SJS is a medical emergency that usually requires hospitalization. Treatment focuses on removing the cause, caring for wounds, controlling pain and minimizing complications as skin regrows. It can take weeks to months to recover. A more severe form of the condition is called toxic epidermal necrolysis (TEN) which involves more than 30% of the skin surface and extensive damage to the mucous membranes.[1][2]

2. CASE DESCRIPTION

A 29-year-old man with edema, ulceration, facial skin peeling, and a low fever for the past two days presented to Parul Sevashram Hospital in Vadodara. He had already experienced convulsions ten days prior, for which he was prescribed Phenytoin 100 mg three times daily. After a few days of beginning medication, erythematous skin and watery fluid-releasing blisters appeared. Mucosae in the mouth and eyes were also affected. Except for the PR, which was 102/min, the vital signs were normal. Examinations of the system were typical. As a result, SJS was diagnosed provisionally. Echocardiograms and ECGs were both normal. Elevated ESR was found in the blood tests. The thrombin time was 15 seconds. The time for an activated partial thromboplastin was 32 seconds. There were 143,000 L/mm3 of platelets. Liver function test results were normal. The MRI was clear. Once the patient was stable, an EEG was scheduled.

He received the proper attention. Following a conversation with the dermatologist, a 100 mg injection of hydrocortisone was started. He was then switched to 1000 mg of sodium valproate twice a day capsules.

After being admitted for a week, the patient was discharged with a healed face skin condition.

3. DISCUSSION

SJS is one of the most disabling medication side effects that has been identified. A study of Clinical, Etiologic, and Histopathologic Features of Stevens-Johnson Syndrome During an 8-Year Period at Mayo Clinic revealed that of 27 patients, 22 (81%) had involvement of two or more mucous membranes, and 19 (70%) had ocular involvement. The patients' mean age was 28.1 years. Clinically this mucocutaneous syndrome resembles SJS/TEN, however there are some clear differences as well.[3]

Despite the fact that the majority of cases are idiopathic, medicine is the most common class of known causes, followed by infections and, very infrequently, malignancy. The following medicines have a high risk of SJS, according to a recent case-control study in Europe called EuroSCAR (European Study of Severe Cutaneous Adverse Reactions). These include trimethoprim-sulfamethoxazole and other anti-infective sulfonamides, lamotrigine, carbamazepine, phenytoin, phenobarbital, allopurinol, nevirapine, and oxicam non-steroidal anti-inflammatory drugs.[3]

In the pathophysiology of SJS, a peculiar, delayed hypersensitive reaction has been suggested. This, in our opinion, is the first instance of phenytoin hypersensitivity being linked to facial involvement and recovery. The mortality rate, which can range from 30% to 100%, is mostly influenced by the patient's age and health. People at either extreme of the age spectrum are typically fatal cases. As a result, healthcare professionals should stay up to date on any changes to treatment recommendations and report any adverse drug reactions to the appropriate authorities.[1]

4. *CONCLUSION*

SJS caused by drugs, usually antibiotics and anticonvulsants, is commonly reported in many parts of the world. Phenytoin, a mainstay of treatment for a variety of seizure disorders, is widely used in most of the countries and is inexpensive also. It is also among the drugs that cause the highest rate of side effects. Hypersensitivity to phenytoin is not uncommon. In addition, informing the patient about the possibility of adverse drug effects is essential. Medical examiners should closely give attention to each patient's family history of allergic drug reaction before administering any medications. Also, basic pharmacogenetic testing should be introduced into health care settings, especially for the drugs that cause serious side effects. Thus, early detection and prompt treatment with corticosteroids may improve the outcome.

5. RECOMMENDATION

If your condition was caused by a medication, you'll need to permanently avoid that drug and others closely related to it.

6. ACKNOWLEDGMENT

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Abbreviations and Acronyms

Stevens-Johnson syndrome (SJS)
Toxic epidermal necrolysis (TEN)
Erythrocyte Sedimentation Rate (ESR)
Pulse Rate (PR)

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Figures and Tables

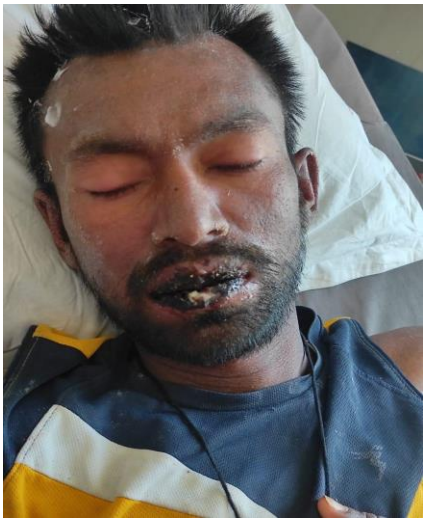

Fig 1*: Rashes and edema all over the face with mucosal involvement of eyes and mouth*

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