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Death by Medication; Nimesulide Induced Stevens-Johnson Syndrome: A Case Report.

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Abstract

Nimesulide is a nonsteroidal anti-inflammatory medicine (NSAID) that has been linked to severe cutaneous adverse events, such as Toxic Epidermal Necrolysis (TEN), a more severe variant of Stevens-Johnson Syndrome (SJS). We report the case of a female patient, age 20, who got SJS not long after starting nimesulide medication for fever and headache. The patient's condition progressively worsened and within 72 hours, TEN was reached despite timely drug cessation and supportive care. The patient died from multi-organ failure despite receiving intensive care in a specialized burn unit, including wound care, fluid resuscitation, and systemic corticosteroids. This case underscores the potentially fatal consequences of Nimesulide-induced severe cutaneous adverse reactions and emphasizes the importance of early recognition, prompt withdrawal of the offending agent, and intensive supportive care in mitigating mortality associated with these conditions. Additionally, it highlights the need for heightened vigilance among healthcare providers regarding the potential risks of NSAIDs.

Keywords: Nimesulide, Stevens-Johnson Syndrome, Toxic Epidermal Necrolysis.

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INTRODUCTION

Steven Johnson Syndrome (SJS) and Toxic Epidermal Necrolysis (TEN) are uncommon illnesses, particularly among young people. While SJS and TEN are similar disorders, TEN is considered a more severe variant with a greater area of skin detachment. Progression from SJS to TEN is uncommon, but it does occur, making this case very worrying.

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During the 8-year research period, 908 new individuals acquired SJS, at an incidence rate of 622 per million population.[1] Over 100 medicines have been linked to SJS/TEN cases. Antibiotics, anti-epileptic medications, and non-steroidal anti-inflammatory medicines (NSAIDs) are frequently shown to be the reasons. [2] T-cells mediate Stevens-Johnson syndrome/toxic epidermal necrosis. Blister fluid contains CD8+ lymphocytes, which have the ability to cause keratinocyte death. There are also CD40 ligand cells, which have the ability to trigger the release of interleukin 8 (IL-8), nitrous oxide, TNF-alpha, and cell adhesion antibodies. Apoptosis is also induced by TNF-alpha. There are Th1 and Th2 cytokines. Natural killer (NK) cells, neutrophils, and macrophages are additional cells linked to Stevens-Johnson syndrome and toxic epidermal necrolysis. Drugs may bind to MHC-1 and the T cell receptor as a result of their pharmacologic interactions with the immune system. A pro-hapten theory offers an alternate explanation, positing that drug metabolites develop into immunogenic substances that activate the immune system. Upper respiratory tract symptoms including a cough, rhinitis, sore eyes, and myalgia, as well as general symptoms like fever and malaise, are the first signs of the sickness. A blistering rash and erosions on the face, trunk, limbs, and mucosal surfaces develop during the course of the following three to four days. Purpuric, annular, targetoid, or erythematous macules, flaccid bullae, Mucosal ulceration, large painful erosions, Nikolsky-positive (lateral pressure on the skin causes epidermis to shed), and erosions can affect the lips, mouth, pharynx, oesophagus, gastrointestinal tract, and eyes. [3]

CASE REPORT

A 20-year-old female patient was admitted to the dermatology department with complaints of skin peeling for three days. Patient was apparently alright 5 days back, then she developed fever, which is insidious, intermittent in nature associated with headache, which is throbbing type .The patient ingested an over-the-counter Nimesulide 100mg tablet orally, and after few hours of drug intake patient complained of 1 episode of vomiting which is non-projectile, patient later developed blistering rash and erosions, first over lip, which was insidious in onset and gradually progressed to face and whole body (Fig: 1&2).

Fig 1:- Blistering rashes and erosions on the face and trunk

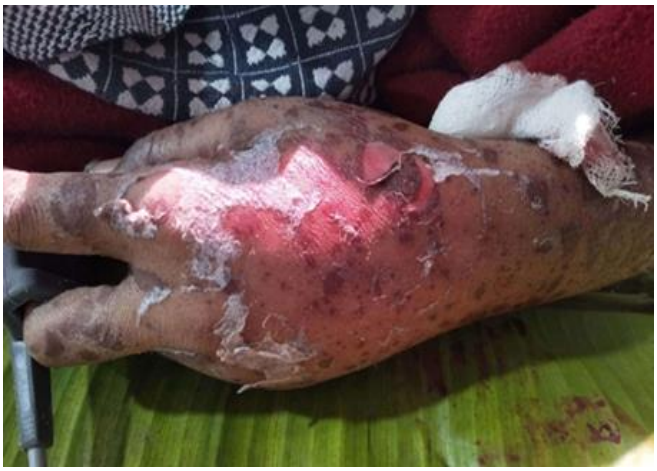

Fig 2: Rashes and Erosions on the limb.

DISCUSSION

Nimesulide-induced SJS is a rare but serious adverse reaction associated with the use of this NSAID. The presentation typically involves widespread mucocutaneous involvement, with potential systemic complications. Early recognition based on clinical features, such as the characteristic skin rash and mucosal involvement, is crucial for prompt intervention. The SCORTEN index serves as a valuable tool in assessing the severity and predicting the mortality risk in SJS cases. where as in our case report SCORTEN corresponded to an expected mortality of 12.1%. The causative relationship between the patient's drug consumption and the subsequent adverse effect that she developed was evaluated using the WHO-UMC causality scale. Since no other medication was taken at the same time, the WHO-UMC causality evaluation suggests a likely temporal link with the drug. Cases with a high SCORTEN

mortality rate of more than 35.8% survived, confounding expectations. In contrast, in our case study, a patient with a significantly lower SCORTEN death rate of 12% died. This stark contrast highlights the inherent unpredictability in individual patient responses and underscores the limitations of prognostic scoring systems in fully capturing the complexities of patient survival. The cases emphasize the need for continuous assessment and personalized approaches in clinical practice, beyond relying solely on numerical mortality scores. The cornerstone of treatment for SJS includes the discontinuation of the offending agent, supportive care, and symptomatic treatment of complications. Systemic corticosteroids and immunosuppressive agents are often utilized to suppress the inflammatory cascade and modulate the immune response, respectively.[4] Prophylactic antibiotic therapy is essential to prevent secondary infections, which can further exacerbate the patient's condition and increase mortality risk. Additionally, supportive measures such as fluid and electrolyte management, nutritional support, and wound care play vital roles in optimizing patient outcomes.[5]

CONCLUSION

Severe cutaneous adverse reactions to NSAIDs, such as those caused by Nimesulide, can be life-threatening. Timely diagnosis, prompt withdrawal of the offending drug, and appropriate supportive management are essential to improve patient outcomes. Enhanced awareness of these risks is vital for healthcare professionals to ensure safer use of NSAIDs.

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Conflict Of Interest

None

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