Case Report

Nimesulide-Induced Stevens–Johnson Syndrome/Toxic Epidermal Necrolysis Overlap: A Case Report

Ankush Bhad[1]*, Piyush Nama[2], Kavita Jaiswal3, Sivasakthi C[4]
1. Junior Resident, Department of Pharmacology, Government Medical College and Hospital, Nagpur, Maharashtra, India.
2-Pharmacovigilance Associate, ADR Monitoring Centre, Department of Pharmacology, Government Medical College, Nagpur, Maharashtra., India.
3- Professor, Department of Pharmacology, Government Medical College and Hospital, Nagpur, Maharashtra, India.
4-Junior Resident, Department of Pharmacology, Government Medical College and Hospital, Nagpur, Maharashtra, India.
***Corresponding author's E-mail:** ankushbhad11@gmail.com

Received: 15-10-2025; **Revised:** 28-11-2025; **Accepted:** 06-12-2025; **Published online:** 20-12-2025.

ABSTRACT

This case report presents a fatal adverse cutaneous drug reaction associated with Nimesulide, a nonsteroidal anti-inflammatory drug (NSAID) still widely prescribed in India. A 52-year-old female with a history of uncontrolled diabetes mellitus and chronic kidney disease presented with a history of painful, rapidly spreading rash with extensive skin detachment, oral ulcerations, and mucosal involvement within 48 hours of initiating Nimesulide. Laboratory investigations revealed severe hyperglycemia, renal dysfunction, hyponatremia, hyperkalemia, and anemia, with a SCORTEN score of 4 indicating poor prognosis. Despite initiation of systemic corticosteroids, intravenous immunoglobulin, insulin, antibiotics, and supportive measures, the patient developed acute respiratory distress and succumbed to cardiopulmonary arrest within 48 hours of admission. Skin and mucosal findings, along with disease progression, confirmed the diagnosis of Stevens–Johnson syndrome/toxic epidermal necrolysis (SJS–TEN) overlap secondary to Nimesulide. This case underscores the life-threatening nature of SJS–TEN, highlights the potential risks of Nimesulide use, and emphasizes the importance of prompt drug withdrawal, early recognition, and multidisciplinary management in improving outcomes. Furthermore, it draws attention to the need for greater pharmacovigilance and stricter regulation of high-risk drugs in clinical practice.

Keywords: Nimesulide, Adverse drug reaction, Stevens–Johnson syndrome, Toxic epidermal necrolysis, Diabetes mellitus, chronic kidney disease.

INTRODUCTION

Stevens–Johnson syndrome (SJS) and toxic epidermal necrolysis (TEN) are severe, immune-mediated cutaneous adverse drug reactions characterized by widespread epidermal necrosis and mucosal involvement. Mortality in TEN can reach up to 30–50%[1]. The drugs most often associated with SJS and TEN include nonsteroidal anti-inflammatory drugs (NSAIDs), certain anticonvulsants, and commonly used antibiotics[2].

Nimesulide, a selective cyclooxygenase-2 (COX-2) inhibitor, is widely used in India for fever and pain but is banned in several countries due to hepatotoxic and dermatological adverse effects[3]. Reports of Nimesulide-induced SJS/TEN remain rare. This report documents a fatal case of SJS–TEN overlaps attributed to Nimesulide in a diabetic patient with chronic kidney disease.

CASE PRESENTATION

Patient Profile and Chief Complaints

A 52-year-old female with a known history of uncontrolled diabetes mellitus and chronic kidney disease presented with peeling of skin, painful erosions over the trunk and extremities, and oral ulcerations for 2 days.

Medical History

Four days prior, she had developed fever and cough and was prescribed Tab. Amoxicillin clavulanic acid (625 mg TDS) and Tab. Nimesulide (by a private practitioner) and information given by relatives. Within 48 hours of initiating Nimesulide, she developed pruritus and fluid-filled lesions that ruptured to form erosions, rapidly spreading to involve multiple sites.

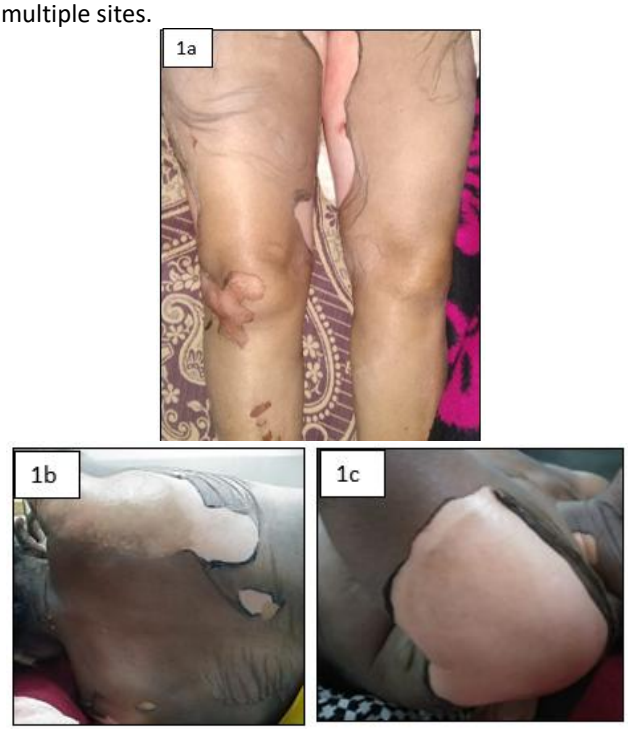

Figure 1: Multiple erosions and areas of denuded skin involving the thighs (1a), upper back (1b), and upper arms (1c). The lesions show irregular borders with surrounding erythema.

Clinical Findings

On admission, she was conscious, oriented, afebrile, and hemodynamically stable (pulse 80/min, BP 100/60 mmHg, RR 18/min). Cutaneous examination revealed two flaccid bullae over the left axilla, multiple erosions on bilateral upper and lower limbs, trunk, and buttocks (size 3×3 cm to 12×10 cm), oral mucosal involvement, and a positive pseudo-Nikolsky sign. Palms, soles, nails, and genitals were spared. The skin involvement was estimated to cover approximately 30% of the total body surface area. Systemic examination was unremarkable.

Laboratory Findings

Baseline labs showed urea 101 mg/dL, creatinine 4.6 mg/dL, sodium 123 mEq/L, potassium 5.5 mEq/L, random blood sugar >600 mg/dL, and SCORTEN score 4 (predicted mortality >35.8%). On Day 1, hemoglobin dropped from 13.2 g/dL to 5.8 g/dL, with urea rising to 156 mg/dL and creatinine 4.4 mg/dL.

Clinical Course and Progression

She started on systemic corticosteroids, intravenous immunoglobulin (IVIg), antibiotics, antihistamines, topical agents, insulin, and supportive care. On Day 1 evening, she developed acute respiratory distress with SpO_2 falling to 60% despite high-flow oxygen. By Day 2, her condition deteriorated further, and she succumbed to cardiopulmonary arrest despite resuscitation.

Final Diagnosis

SJS–TEN overlap secondaries to Nimesulide, complicated by uncontrolled diabetes mellitus, acute kidney injury on CKD, severe anemia, and impending respiratory failure.

DISCUSSION

SJS and TEN represent a spectrum of severe cutaneous adverse drug reactions with significant morbidity and mortality[1]. The pathogenesis involves keratinocyte apoptosis triggered by cytotoxic T-lymphocytes, Fas/FasL signaling, and pro-inflammatory cytokines (TNF-α, IL-6)[4].

In our patient, the onset of mucocutaneous lesions occurred within 48 hours of Nimesulide intake, supporting a causal relationship. The SCORTEN score predicted a mortality >35.8%, which was consistent with the unfavorable outcome.

Management of SJS/TEN remains controversial. Corticosteroids, when initiated early, may reduce immune-mediated epithelial destruction[5]. Intravenous immunoglobulin (IVIg) blocks Fas-mediated apoptosis and is often used in severe cases[6]. Supportive care with wound management, fluid–electrolyte balance, glycemic control, and infection prevention remains the cornerstone of therapy[7].

Our patient had multiple poor prognostic factors — advanced age, uncontrolled diabetes, renal impairment, severe anemia, and high SCORTEN score — which likely contributed to the rapid fatal outcome despite aggressive therapy.

CONCLUSION

This case underscores the potential of Nimesulide, a commonly prescribed NSAID, to cause life-threatening SJS–TEN overlaps. Strict regulation of Nimesulide use, public and physician awareness, and robust pharmacovigilance are essential to prevent such adverse drug reactions. Early recognition, drug withdrawal, and multidisciplinary care remain the mainstay of management.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent form. In the form, the patient has given her consent for her images and other clinical information to be reported in the journal. The patient understands that her name and initials will not be published and due efforts will be made to conceal identity, but anonymity cannot be guaranteed.

Acknowledgments: We extend our sincere gratitude to National Coordination Centre - Pharmacovigilance Programme of India (PvPI), Indian pharmacopoeia commission, Ministry of health & Family welfare, Govt. of India for their guidance and support.

Source of Support: The author(s) received no financial support for the research, authorship, and/or publication of this article

Conflict of Interest: The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

REFERENCES

1. Harr T, French LE. Toxic epidermal necrolysis and Stevens-Johnson syndrome. Orphanet journal of rare diseases. 2010 Dec 16;5(1):39-46.
2. Mockenhaupt M. Epidemiology of cutaneous adverse drug reactions. Allergologie select. 2017 Aug 4;1(1):96-102.
3. Tiwaskar M, Charde S, Balankhe N, Hegde A, Deodhar M, Gondane A, Pawar D, Sharma A. Nimesulide: Critical Appraisal of Safety and Efficacy in Acute Pain. The Journal of the Association of Physicians of India. 2025 Mar;73(3):e22-8.
4. Abe R. Immunological response in Stevens–Johnson syndrome and toxic epidermal necrolysis. The Journal of dermatology. 2015 Jan;42(1):42-8.
5. Roujeau JC, Stern RS. Severe adverse cutaneous reactions to drugs. New England Journal of Medicine. 1994 Nov 10;331(19):1272-85.
6. Prins C, Kerdel FA, Padilla RS, Hunziker T, Chimenti S, Viard I, Mauri DN, Flynn K, Trent J, Margolis DJ, Saurat JH. Treatment of toxic epidermal necrolysis with high-dose intravenous immunoglobulins: multicenter

retrospective analysis of 48 consecutive cases. Archives of dermatology. 2003 Jan 1;139(1):26-32.

7. Schneider JA, Cohen PR. Stevens-Johnson syndrome and toxic epidermal necrolysis: a concise review with a comprehensive summary of therapeutic interventions emphasizing supportive measures. Advances in Therapy. 2017 Jun;34(6):1235-44.