

# Ten out of Ten: Toxic epidermal necrolysis

Poster  
No 66

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## Introduction

Toxic epidermal necrolysis (TEN) is a severe, potentially fatal mucocutaneous reaction involving 30% or more body surface area (BSA) with a high mortality rate. Stevens-Johnson syndrome (SJS) is the least severe form, involving less than 10% BSA. SJS/TEN overlaps involve 10-30% BSA.

## Case report

A 59 years old gentleman presented to the emergency room complaining of fever, generalized rashes, painful oral erosions, and productive cough. His medications include insulin, bisoprolol, cardiprin, and phenytoin - which was commenced 3 months ago after being hospitalized for meningoencephalitis.

Physical examination shows interspersed areas of desquamation, blisters, and atypical target lesions located primarily in the trunk, upper limbs, and genital area. There are also bilateral purulent conjunctivitis and erythematous oral mucosa erosions. Chest X-ray shows right lower zone consolidation.

The patient was admitted into general ward and started on antibiotics, hydrocortisone, and ciclosporin. He shows an excellent response to treatment and was allowed home after 2 weeks with topical emollients and oral steroids.



Figure 1:  
Widespread atypical targetoid lesions.



Figure 2: Oral mucosal erosions.

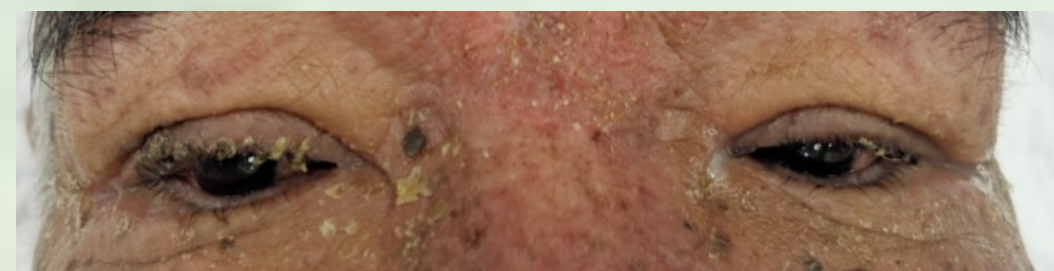


Figure 3 (Above):  
Bilateral purulent conjunctivitis.



Figure 4 (Right):  
Extensive skin desquamation of the hand.

SCORTEN parameters	Score
Age > 40 years	1
Malignancy	1
Tachycardia (>120/min)	1
Initial surface of epidermal detachment >10%	1
Serum urea >10 mmol/l	1
Serum glucose >14 mmol/l	1
Bicarbonate >20 mmol/l	1

## Discussion

Multiple aetiologies are associated with TEN, with drugs such as allopurinol, antiepileptics, and sulfur-group antibiotics topping the list. The earliest cutaneous manifestations are atypical target lesions that rapidly evolve into vesicles and bullae followed by diffuse skin desquamation, often involving the eyes and the mucosa. Hypovolemic shock and electrolyte imbalance may occur in severe cases with extensive skin detachments. Furthermore, complications such as secondary infections, pneumonia, interstitial pneumonitis, acute respiratory distress syndrome, gastrointestinal ulceration, and perforations are common.

SCORTEN (SCORE of Toxic Epidermal Necrosis) is used to determine the disease's prognosis and severity, and close monitoring in intensive care or burn unit is recommended if the score is 2 or more.

Identification and withdrawal of causative agents are the crucial first steps in management. This is followed by stringent supportive care, similar to managing burn patients: Wound care, fluid and electrolyte management, nutritional support, ocular care, temperature management, pain control, and monitoring for complications. The role of systemic corticosteroids in TEN/SJS remains uncertain; however, multiple studies show cyclosporin may be beneficial. The mortality rate for TEN is more than 30%.

## Reference

- Hoetzenecker W, Mehra T, Saulite I, et al. Toxic epidermal necrolysis. *F1000Res*. 2016;5:F1000 Faculty Rev-951. Published 2016 May 20. doi:10.12688/f1000research.7574.1
- Harris V, Jackson C, Cooper A. Review of Toxic Epidermal Necrolysis. *Int J Mol Sci*. 2016;17(12):2135. Published 2016 Dec 18. doi:10.3390/ijms17122135
- Harr T, French LE. Toxic epidermal necrolysis and Stevens-Johnson syndrome. *Orphanet J Rare Dis*. 2010;5:39. Published 2010 Dec 16. doi:10.1186/1750-1172-5-39