

## Bilateral panophthalmitis following toxic epidermal necrolysis: A case report

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A 70 year old man presented with systemic signs of toxic epidermal necrolysis (TEN) following consumption of diclofenac tablets for a prodromal illness a week back. Ophthalmic evaluation showed no perception of light in both eyes along with lid edema, total corneal sloughing, and pus-filled anterior chamber. An amniotic membrane transplant was planned but within a few hours, both eyes developed panophthalmitis with restricted extraocular movements and mild proptosis and had to be eviscerated. This is perhaps the first case showing such devastating sequelae of TEN.

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Toxic epidermal necrolysis (TEN) is a rare dermatological disorder characterized by extensive epidermal detachment and erosion of mucous membranes.<sup>[1]</sup> In addition to the skin, the ocular surface is the most commonly affected in 83% cases.<sup>[2,3]</sup> It can also be fatal due to involvement of the oral, gastrointestinal, and genitourinary mucosa.<sup>[4]</sup> TEN is most often a sequelae of drug intake and is seen as an idiosyncratic reaction.<sup>[5]</sup> Although ophthalmic features of TEN, affecting the ocular surface, are well described, we present a rare case of bilateral panophthalmitis requiring evisceration of both eyes following TEN.

### Case Report

A 70-year old previously healthy man presented with sudden and severe loss of vision in both eyes along with eye pain, conjunctival injection, and swelling since the past 4 days. A history was elicited of consuming oral diclofenac for a viral prodrome 6 days back following which he developed rashes all over the body along with oral mucosal ulcerations. On examination, he had macular rash over his upper torso, and new ulcerating lesions over her buccal and perioral tissue [Fig. 1a]. A diagnosis of toxic epidermal necrolysis (TEN) was made by the dermatologist and

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**Figure 1:** (a) Skin and lips and buccal mucosal erosions. (b) Extensive corneal sloughing with pus filled anterior chamber. (c and d) Full blown panophthalmitis in both eyes

supportive treatment was initiated in the septic intensive care unit.

Ophthalmic evaluation revealed extreme conjunctival congestion, corneal sloughing, and thinning in both eyes along with severe anterior chamber reaction and hypopyon [Fig. 1b]. In view of imminent corneal perforation, an amniotic membrane transplant was planned for both eyes while topical moxifloxacin and lubricants were started. However, within a few hours, there was corneal perforation with uveal prolapse [Fig. 1c and d] in both eyes along with mild proptosis, lid edema, and restricted extraocular muscles. Despite intensive topical and systemic treatment, including systemic steroids, electrolytes, and antibiotics, the panophthalmitis progressed rapidly and required evisceration in both eyes within 24 h. The patient died after 48 h of evisceration due to multi-organ failure due to the TEN. The eviscerated material and blood culture sent for microbiological examination did not reveal any bacterial growth after 48 h.

## Discussion

Ophthalmic manifestations of TEN in the acute stage have been long recognized and ranges from asymptomatic corneal involvement to severe corneal ulceration and rarely perforation.<sup>[6,7]</sup> Isawi *et al.* reported a case of bilateral corneal melting due to tear deficiency secondary to Stevens-Johnson

syndrome (SJS) following use of topical bromfenac.<sup>[8]</sup> Oral nonsteroidal anti-inflammatory drugs are also known to cause SJS and TEN.<sup>[3]</sup> Severe dry eye, symblepharon, and other cicatricial sequelae along with limbal stem cell loss following SJS can lead to vision-threatening complications.<sup>[2,3]</sup>

Amniotic membrane transplantation is indicated in the acute stage of disease to prevent perforation, provide a natural bandage-like effect and avoid cicatricial complications.<sup>[9]</sup> In our patient, the corneal melting progressed very rapidly and led to bilateral panophthalmitis necessitating evisceration. The pathologic basis in such cases is similar to changes seen in the skin, i.e., severe inflammation, an outpouring of cytotoxic CD 8 lymphocytes and cytokine release which may weaken the stromal-epithelium interface with resultant perforation.<sup>[10]</sup> In addition, Ueta showed that the most severe ocular complications occur due to nonsteroidal anti-inflammatory drugs, as in our case, possibly mediated by a combination of multiple gene polymorphisms and their interactions besides microbial infections.<sup>[5]</sup>

Most globes with perforation can be salvaged with AMT followed by a tectonic penetrating keratoplasty.<sup>[2]</sup> This case represents an extreme presentation of TEN, which, to the best of our knowledge, has not been described before. Ophthalmologists and dermatologists should be aware of this rare complications and earliest signs should prompt aggressive treatment to avoid such catastrophic sequelae.

## Declaration of patient consent

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

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## Conflicts of interest

There are no conflicts of interest.

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