

# Carbamazepine induced Stevens-Johnson syndrome

Andre B S Khoo,<sup>1</sup> Faisal R Ali,<sup>2</sup> Zenas Z N Yiu,<sup>3</sup> Janice E Ferguson<sup>3</sup>

<sup>1</sup>Department of Dermatology, Norfolk & Norwich University Hospital, Norwich, UK

<sup>2</sup>St Johns Institute of Dermatology, London, UK

<sup>3</sup>Department of Dermatology, Salford Royal NHS Foundation Trust, Salford, UK

## Correspondence to

Dr Andre Khoo,  
andre.khoo@cantab.net

Accepted 23 February 2016

## DESCRIPTION

A 36-year-old Sri Lankan man had a 10-year history of epilepsy, which was well controlled on sodium valproate. Having run out of his regular medication on vacation, he started taking his

sister's carbamazepine. He presented to the emergency department 9 days later with general malaise and widespread blisters. On examination, he was febrile, tachycardic and had centrally blistered targetoid skin lesions (figure 1), and pronounced oral and genital mucosal ulceration (figure 2). This was consistent with a diagnosis of Stevens-Johnson syndrome (SJS), a drug-induced dermatological emergency on a continuum with toxic epidermal necrolysis (TEN).

Common precipitants of SJS include anticonvulsants, antibiotics (notably sulfonamides), allopurinol and non-steroidal anti-inflammatory drugs. The mainstay of management is stopping the offending agent and meticulous supportive care. Active interventions including systemic corticosteroids, intravenous immunoglobulin and ciclosporin have been tried in patients with SJS–TEN, but the evidence for benefit is inconclusive.<sup>1</sup> In patients of



Figure 1 Blistering targetoid lesions on the trunk.

## Learning points

- ▶ Carbamazepine is associated with Stevens-Johnson syndrome/toxic epidermal necrolysis in carriers of the human leucocyte antigen (HLA) B\*1502 gene.
- ▶ The HLA B\*1502 gene is most frequently found in Asian populations (Indians, Han Chinese, Thais and Malays) and these individuals should undergo genetic screening prior to the start of either carbamazepine or phenytoin.



Figure 2 Oral and mucosal ulcerations.



CrossMark

**To cite:** Khoo ABS, Ali FR, Yiu ZZN, et al. *BMJ Case Rep* Published online: [please include Day Month Year] doi:10.1136/bcr-2016-214926

Asian Indian descent, possession of the human leucocyte antigen (HLA) B\*1502 allele is strongly associated with carbamazepine induced SJS or TEN.<sup>2</sup> Genetic testing for this haplotype is recommended prior to prescription in Asian populations with high carrier frequency (Indians, Han Chinese, Thais and Malays) as HLA B\*1502 is also linked to SJS/TEN induced by phenytoin.<sup>2 3</sup>

**Contributors** AK performed the literature review, wrote the final draft and submitted the document for publication. FA was involved in writing the initial as well as final drafts and proofread the drafts for accuracy. ZZNY wrote the initial draft of the article. JF is the consultant in charge of the patient who initiated the idea of this publication.

**Competing interests** None declared.

**Patient consent** Obtained.

**Provenance and peer review** Not commissioned; externally peer reviewed.

## REFERENCES

- 1 Schwartz RA, McDonough PH, Lee BW. Toxic epidermal necrolysis: part II. Prognosis, sequelae, diagnosis, differential diagnosis, prevention, and treatment. *J Am Acad Dermatol* 2013;69:187.e1–16; quiz 203–4.
- 2 Khor AH, Lim KS, Tan CT, *et al.* HLA-B\*15:02 association with carbamazepine-induced Stevens-Johnson syndrome and toxic epidermal necrolysis in an Indian population: a pooled-data analysis and meta-analysis. *Epilepsia* 2014;55:e120–4.
- 3 Chen Z, Liew D, Kwan P. Effects of a HLA-B\*15:02 screening policy on antiepileptic drug use and severe skin reactions. *Neurology* 2014;83:2077–84.

Copyright 2016 BMJ Publishing Group. All rights reserved. For permission to reuse any of this content visit <http://group.bmj.com/group/rights-licensing/permissions>.

BMJ Case Report Fellows may re-use this article for personal use and teaching without any further permission.

Become a Fellow of BMJ Case Reports today and you can:

- ▶ Submit as many cases as you like
- ▶ Enjoy fast sympathetic peer review and rapid publication of accepted articles
- ▶ Access all the published articles
- ▶ Re-use any of the published material for personal use and teaching without further permission

For information on Institutional Fellowships contact [consortiasales@bmjgroup.com](mailto:consortiasales@bmjgroup.com)

Visit [casereports.bmj.com](http://casereports.bmj.com) for more articles like this and to become a Fellow