The prolonged hospital course of a 59-year old male with Stevens-Johnson syndrome/Toxic epidermal necrolysis-like eruption associated with nivolumab therapy for metastatic melanoma

Cesar A. Virgen,¹ Dong J. Kim,¹ Kenneth G. Linden,¹ Nathan W. Rojek¹

¹Department of Dermatology, University of California Irvine, Irvine, USA

Introduction

Immune checkpoint inhibitors are associated with a variety of dermatologic immune-related adverse events (irAEs). These irAEs diminish patients' quality of life and in some cases lead to discontinuation of cancer therapy. In this report, we describe the 70-day hospital stay of a patient with SJS/TEN-like eruption associated with nivolumab use for the treatment of metastatic melanoma. The rash developed 16 days after the initial dose of nivolumab.

PMH: Metastatic melanoma, hypertension, "erythroderma-like rash on arms/back [...] face/legs spared" (treated with Prednisone taper, stopped two weeks before the start of immunotherapy).

Medications: Lisinopril, Ondansetron, Hydroxyzine, Trazodone, Morphine, Norco.

Case report

Hospital day #1

Scalp, neck, trunk, and all extremities with erythematous red/dusky patches with numerous scattered small blisters.

Back >> chest >> extremities with numerous patches of denuded skin.

Estimated BSA 20%.

Soft palate and hard palate with denuded mucosal surface.

Nikolsky's sign positive.

No lymphadenopathy appreciated.

Dermatopathology

Full thickness epidermal necrosis associated with a complete separation of the epidermis and dermis at the dermoepidermal junction. Perivascular lymphocytic infiltrate. Neutrophils in the blister cavity.

Direct immunofluorescence studies

Negative for IgG, IgM, and IgA deposition.

Non-specific 1+ granular C3 deposition in epidermal basement membrane zone.

Other diagnostic laboratory studies

Indirect immunofluorescence BMZ IgG, IgG4, and IgA negative.

ELISA IgG BP180 and IgG BP230 negative.

Indirect immunofluorescence cell surface IgG negative.

ELISA Dsg1 and Dsg3 negative.

ELISA Collagen VII IgG negative.

Diagnosis

Stevens-Johnson syndrome/Toxic epidermal necrolysis (SJS/TEN)-like eruption associated with the use of nivolumab for metastatic melanoma.

SCORTEN 3 (BSA >10%, active malignancy, age >40)

CTCAE grade 4 reaction.

Treatment

Intravenous immunoglobulin (IVIg) infusions 3 gm/kg divided in 4 days.

Topical Clobetasol twice daily to erythematous areas (not denuded).

Wound care per Burn ICU (petrolatum-based gauze pads, non-adherent materials).

Ophthalmology, Gastroenterology, Nutrition, Palliative care consults.

Discontinued nivolumab infusions.

Hospital day #7

Erythematous patches.

No denuded patches.

Hospital day #12

Skin continues to improve.

Nearly completely healed.

Following days

MSSA and *Serratia marcescens* bacteremia.

Altered mental status.

Acute hypoxemic respiratory failure, intubated, PEA cardiac arrest -> ROSC.

Renal failure, anasarca.

Hospital day #19

Edema blisters with superficial desquamation.

Anasarca treated with Bumex drip and

albumin infusions.

Then hemodialysis.

Hospital day #29

Right eye symblepharon. Prokera membranes placed. IV steroids for 3 days.

Hospital day #33

Edema blisters resolved.

Developed fungemia.

Hospital day #44

Multifactorial delayed skin wound healing.

Supportive therapy, focus on nutrition and wound care.

Hospital day #70

Post-inflammatory hyperpigmentation.

Discharged to home hospice.

Conclusions

Prompt identification and management of severe cutaneous irAEs and multiorgan failure is essential to improve cancer patient outcomes. We strongly encourage multidisciplinary collaboration between dermatologists, oncologists, and other medical specialists.