



# Getting to the heart of DRESS: when dermatology manages the cardiac ICU patient

Christopher Iriarte, MD<sup>1</sup>; Daniel Yanes, MD<sup>1</sup>; Steven Chen, MD, MPH, MS-HPed<sup>1</sup>



1) Department of Dermatology, Massachusetts General Hospital; Boston, Massachusetts

## Learning Objectives

- 1) Dermatologists play a vital role in screening for and managing end organ damage in severe cutaneous adverse reactions (SCARs).
- 2) IVIG is a potential therapeutic option for drug reaction with eosinophilia and systemic symptoms (DRESS) that can facilitate reversal of end organ damage.

## Case Presentation

A 76-year-old male with a history of atrial fibrillation and CKD was admitted to the cardiac ICU. He had originally presented with fevers and chest pain and was found to have MSSA bacteremia and endocarditis, for which he was started on a 6-week course of IV oxacillin. His course was complicated by a mitral valve abscess with focal perforation for which he underwent mitral valve replacement.

Our service was consulted for a rash ongoing for nearly three weeks. On our exam, he had diffuse, scaly, erythematous plaques progressing to exfoliative erythroderma with extensive involvement of the face (**Figure 1**). Over the course of his hospitalization, his renal function progressively declined requiring CVVH, started on the day of dermatology consultation. His AKI was attributed to acute interstitial nephritis, as he was also noted to have a persistent peripheral eosinophilia during the course of the rash. He remained on pressor support for bi-ventricular heart failure of unclear etiology.

### Relevant Data (on day of consult):

- Cr 5.65 mg/dL. eGFR 9 mL/min (baseline: Cr 0.9; eGFR 50)
- LFT's unremarkable
- CBC differential notable for 42.6% eosinophils

Figure 1



**Endomyocardial Biopsy (native right ventricle):**  
Focal eosinophilic hypersensitivity myocarditis

**HHV-6 PCR:** detectable at 286 copies/mL

Table 1

Parameter	Baseline	Day of Consult	Discharge
Cr (mg/dL)	0.9	5.65	0.93
GFR (mL/min)	50	9	79
Troponin (ng/L)	49	2,661	273

## Outcomes & Discussion

- Given high suspicion for DRESS, dermatology consultation recommended checking HHV-6 PCR and troponins, discontinuation of oxacillin, and consideration of IV steroids.
- Patient spiked a fever and was found to have high grade *Pseudomonas* bacteremia. Given concern for immunosuppressive effect of IV steroids, IVIG was instead started at 1 g/kg for 2 days.
- Once blood cultures were clear for 48 hours on broad-spectrum antibiotics, systemic steroids (1 mg/kg daily of PO prednisone) were initiated.
- Patient experienced clinical improvement in rash, down-trending of troponin (**Table 1**) with weaning off pressor support, and significant improvement in renal function with resumption of spontaneous urination and ability to wean off CVVH within 2 days of IVIG.
- DRESS is a SCAR with high morbidity and mortality rates (up to 10% in some studies) secondary to fulminant hepatitis, nephritis, myocarditis, or pneumonitis.<sup>1</sup> DRESS is thought to be due to both a drug specific immune response and virus reactivation.<sup>1-2</sup>
- Both the pediatric and adult literature have suggested that IVIG is a successful adjuvant therapy in patients with DRESS.<sup>1,3</sup>

## References

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Christopher Iriarte  
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Steven Chen