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## A unique case of drug reaction with eosinophilia and systemic symptoms

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**Background:** Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS) is a type-IV hypersensitivity drug reaction with multi-organ involvement. It carries up to a 10% mortality risk; therefore, early recognition and discontinuation of the offending agent are key to managing this potentially life-threatening condition. Diagnosis is based on clinical criteria, which include rash, fever, lymphadenopathy, eosinophilia, atypical lymphocytes, and involvement of internal organs. We present a rare case of DRESS syndrome induced by self-medicated over-the-counter guaifenesin for nasal congestion. The purpose of our study is to create awareness of possible lethal reactions that may occur even when using some of the least (presumed) harmful drugs in clinical practice.

**Case Report:** A 32-year-old male with no past medical history presented to the Emergency Department (ED) with 2 weeks of weakness and a generalized pruritic maculopapular rash (Image 1). Patient reported no history of sick contacts, exposure to animals, insects, wild plants, or new hygiene products. He denied taking any medications except for over-the-counter guaifenesin for nasal congestion 3 weeks prior to ED visit. Initial physical exam was unremarkable except for a diffuse maculopapular rash with follicular accentuation sparing palms, soles, and mucous membranes (Image 2). Laboratories were significant for a white blood cell count of 21,900 cells/uL and eosinophils of 3,500 cells/uL. Other labs including comprehensive metabolic panel, hepatitis panel, Mycoplasma, EBV, HIV, and Herpesvirus were negative. During the course of hospitalization, the patient developed acute kidney injury (AKI) along with prominent submandibular and submental lymphadenopathy and desquamation of his rash. Atypical lymphocytes were found on peripheral smear. Skin biopsy showed spongiosis and a superficial mixed inflammatory infiltrate with eosinophils, consistent with DRESS. Based on RegiSCAR criteria, patient was diagnosed with DRESS and treatment was initiated with 20-day prednisone taper. Patient had complete resolution of his skin eruption in 2 weeks.

**Conclusion:** This case reminds us that there can be unexpected side effects and reactions from drugs that we use in our everyday clinical practice. In this case, the skin rash was the initial sign of more serious internal organ involvement. We conclude that over-the-counter guaifenesin was the culprit drug and should be suspected as a cause of DRESS syndrome in the right clinical context.



**Image 1:** Diffuse Maculopapular Skin Rash in DRESS; **Image 2:** Follicular Accentuation and Sparing of Palms

**Biography**

Alvaro J Rodriguez, MD, is currently a Medicine Resident Physician at the Icahn School of Medicine at Mount Sinai West. He is the author of recently published textbook, "Dermatology for the USMLE". He has dedicated a major part of his medical career to teaching and helping students prepare for the USMLE, including teaching re-view courses. His interest in dermatology includes DRESS syndrome, toxic erythema of chemotherapy, atopic dermatitis, psoriasis and infectious skin disorders.

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