Lady in Red: A Fatal Case of DRESS

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Background

- Drug reaction with eosinophilia and systemic symptoms (DRESS) is a rare, life-threatening drug-induced hypersensitivity reaction.
- The following case illustrates diagnostic complexities.

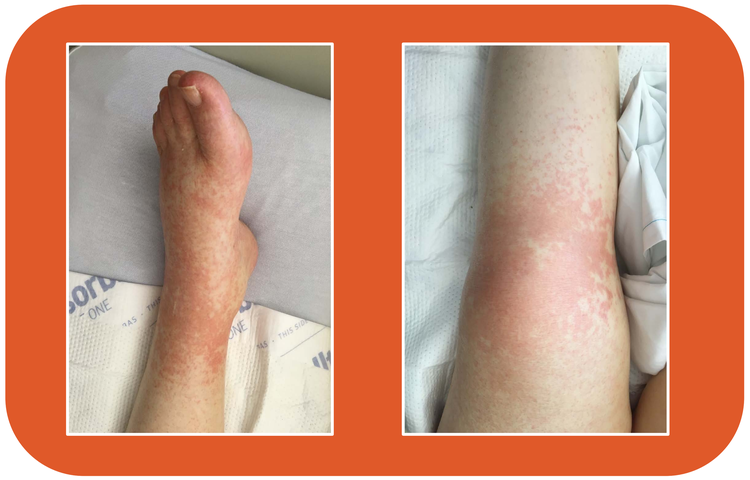
Case Presentation

- **HPI:** A 72 year-old female with hypertension, DM2, and newly diagnosed gout presented to our ED complaining of a worsening abdominal rash and diarrhea for one month after an extensive outpatient evaluation. She reports her rash began as erythematous patches on her stomach one week after starting allopurinol for her gout, followed by nonbloody diarrhea. She went to an urgent care where she was prescribed a methylprednisolone dose pack, diphenhydramine as needed, and metronidazole for possible colitis. Her symptoms worsened and her rash coalesced across her abdomen. Her allopurinol and metronidazole were discontinued, however she developed intermittent fevers and was advised to come to our ED..
- **Pertinent Physical Exam Findings:**
  - On arrival, she was afebrile, hemodynamically stable, Neuro: AOx0, confused
  - Abdomen: diffusely tender to palpation
- **ED Course:**
  - EKG: NSR
  - Leukocytosis up to 20k cells/uL (n: 5-12k) with a marked eosinophilia of 22%
  - She was started on IV fluids and IV antibiotics with Piperacillin/Tazobactam.

Clinical Course

- A CT abdomen showed diverticulosis without acute inflammation.
- Neurology and GI were consulted who advised outpatient follow-up.
- Blood cultures remained sterile.
- Two weeks later she returned to the ER complaining of recurrent rash and diarrhea.
- She was again afebrile, hemodynamically stable, but her abdominal rash was now desquamating.
- Her eosinophilia had resolved, but her liver enzymes rose >3 times the upper limit of normal with a normal lipase.
- She was started on high dose systemic glucocorticoid therapy and admitted for close monitoring of possible DRESS.
- Her condition deteriorated despite therapy.
- She went into cardiopulmonary arrest on day 3, was intubated and transferred to the ICU.
- She remained hypotensive despite IV fluid resuscitation with multiple vasopressors.
- She expired two days later.

Figure 1. Erythematous Rash



Discussion

- DRESS is characterized by a severe rash, fever, hypereosinophilia, and end organ damage classically due to medications including allopurinol.
- Symptoms can begin within two weeks of exposure with variable duration despite treatment.
- Our patient met multiple diagnostic criteria with a skin eruption, eosinophilia, and end organ damage
- **Diagnostic Scoring includes Eosinophilia ≥20%, suggestive desquamating rash covering ≥50% of body surface area, two or more organs involved, a disease duration >15 days, and no evidence of alternative cause including negative blood cultures, ANA, and Hepatitis serology.**
- Treatment focuses on prompt withdrawal of the offending drug, and systemic steroid administration.
- Research is limited by the rarity of the disease, but previous reports document an incidence of DRESS in .4% of patients receiving allopurinol, and a series of 38 patients with DRESS found 5.3% were exposed to allopurinol.
- Careful monitoring of patients on allopurinol therapy can prevent fatal cases of DRESS.

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