Dobutamine-Induced Eosinophilia; Medically Challenging Case

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Background: Eosinophilia can occur in response to allergens, drugs, parasites, immunologic, neoplastic and idiopathic etiologies. We present an unusual scenario of eosinophilia in the wake of a routinely used inotrope, dobutamine.

Case Description: A 49-year-old male admitted for acute decompensated heart failure developed eosinophilia (4100 /μL), pruritus and flushing after 48 hours. His only new medications were dobutamine and furosemide. He denied recent travels, gastrointestinal symptoms, weight loss, fatigue or atopy. At first, furosemide was switched to torsemide without any improvement. Next dobutamine was discontinued with normalization of eosinophilia within 24 hours. Due to poor cardiac function, dobutamine was restarted and eosinophilia returned confirming our suspicion of dobutamine being responsible for the eosinophilia.

Conclusion: Drug-induced eosinophilia typically occurs with antibiotics or seizure medications and this patient was taking neither. Eosinophilia due to dobutamine is rarely reported and may lead to eosinophilic myocarditis. This case exhibits an unusual complication of a widely used inotrope. In this case, recognizing the temporal relation between the rise of the eosinophil count and drug administration helped determine the offending agent.