



Dobutamine-Induced Eosinophilia

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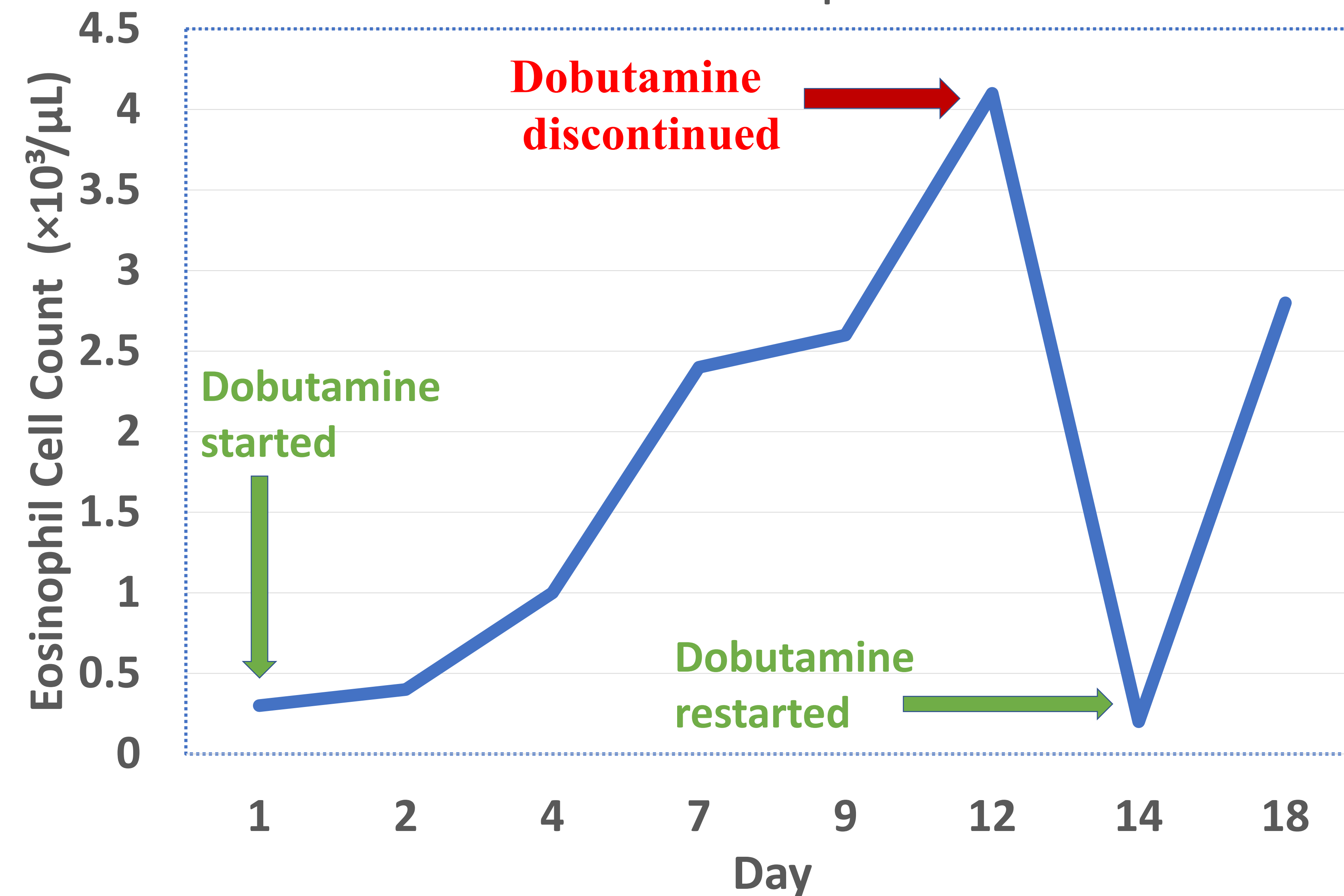
INTRODUCTION

- Eosinophilia can occur in response to allergens, drugs, parasites, immunologic, neoplastic and idiopathic etiologies.
- Dobutamine has been infrequently associated with eosinophilia.
- 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 on chronic decompensated heart failure developed eosinophilia, flushing and pruritus without any rash 48 hours after admission.
- Past medical Hx of heart failure with reduced ejection fraction, chronic kidney disease, HTN, HLD and DM .
- His only new medications were dobutamine and furosemide; started at admission.
- Denied recent travels, gastrointestinal symptoms, weight loss, fatigue or previous history of atopy.
- No signs of end organ involvement.
- Initial work up included vitamin B12, folate, TSH, HIV, immunoglobulins, tryptase, Strongyloides IgG and S tool O/P which were unremarkable.
- At first, furosemide was switched to torsemide without any improvement.
- Next dobutamine was discontinued on day 12 with normalization of eosinophilia within 48 hours.

Absolute Eosinophil Count



- Due to poor cardiac function, dobutamine was restarted on day 14 and eosinophilia returned confirming our suspicion of dobutamine being responsible for the eosinophilia.

DISCUSSION

- Drug induced eosinophilia typically occurs with antibiotics or seizure medications and this patient was taking neither.
- Eosinophilia secondary to Dobutamine usually correlates with the infusion duration; short-term treatment associated with local and immediate hypersensitivity reactions, and long-term treatment causing severe peripheral eosinophilia.

- Symptoms may vary from subclinical or local skin reactions to widespread systemic inflammation.
- Dobutamine has also been associated with eosinophilic myocarditis. Should be suspected in patients with new peripheral eosinophilia and clinical deterioration. Confirmed by endomyocardial biopsy if suspected.
- Treatment is dobutamine cessation.

CONCLUSION

- This case exhibits an unusual complication of a widely used inotrope. Recognizing the temporal relation between the rise of the eosinophil count and drug administration helped determine the offending agent.

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