Atorvastatin Associated Eosinophilic Spongiosis: A Case Report

Feras Al-Moussally1,2, Omar Masarweh1,2, Brittany Thompson3, Neel Shah3, Jorge Restrepo1,2,4 Sudeep Gaudi5

1. University of Central Florida/HCA Florida Healthcare, Greater Orlando, FL
2. Department of Internal Medicine, University of Central Florida College of Medicine, Orlando, FL
3. University of Central Florida College of Medicine, Orlando, FL
4. Department of Education, Orlando VA Healthcare System, Orlando, FL
5. Section of Pathology, Orlando VA Healthcare System, Orlando, FL

Introduction

- Atorvastatin is an HMG-CoA reductase inhibitor routinely prescribed for the management of hypercholesterolemia.
- The most common dermatological side effect of statins are pruritus and rash.
- Eosinophilia has been previously linked to atorvastatin, though not in the form of eosinophilic spongiosis according to current literature.
- We present a case of a 73-year-old gentleman who developed diffuse eosinophilic spongiosis after atorvastatin exposure.

Case Presentation

- A 73-year-old male with history of deep vein thrombosis, hyperlipidemia, depression, tobacco use disorder, obstructive sleep apnea, hypothyroidism, chronic obstructive pulmonary disease, essential tremor, hemochromatosis, alcohol use disorder, prostate cancer status post prostatectomy, presented to the hospital with worsening rash and swelling for 4 days.
- Started on atorvastatin one year prior then developed a severe rash one day later that improved after discontinuation. Since exposure, he has had recurrent spontaneous exacerbations of the same rash.
- Physical examination: erythematous scaling blanchable plaques on the back, shoulders, arms, and mid chest. (Figure 1)

- Punch biopsy: parakeratosis, spongiosis, and acanthosis overlying a superficial and mid, perivascular, predominantly lymphohistiocytic infiltrate containing several eosinophils, with rare eosinophils involving the epidermis. PAS-D stain did not show significant basement membrane changes or pathogenic fungal elements. Immunofluorescence exam was negative for IgG, IgM, IgA, and C3 deposits. (Figure 2-3)
- Given diphenhydramine and topical steroids which improved his rash but did not completely resolve.

Discussion

- Atorvastatin has been linked to numerous conditions that involve eosinophilia including eosinophilic fasciitis and DRESS syndrome.
- Eosinophilic spongiosis is a histopathological finding characterized by the presence of intraepidermal eosinophils and it is seen in numerous dermatological conditions.
- Immunofluorescence studies can be used to confirm and distinguish between these disorders, which often present without concomitant vesicles or blisters when eosinophilic spongiosis is present.
- Treatment involves withdrawal from the offending agent and symptomatic management.

Conclusion

- This case highlights the importance of a thorough clinical history to detect potential influencing factors, such as a remote medication exposure.
- For atorvastatin induced dermatological symptoms, treatment involves withdrawal from the offending agent as well as the addition of a medication to treat symptomatically if needed.

References