

IVIG: An Unlikely Culprit of Fixed Drug Eruption

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Introduction

A fixed drug eruption (FDE) is a drug-induced cutaneous rash or lesion that appears in a fixed location shortly after re-exposure to the same drug.¹ Common agents of FDE include sulfa drugs, various antibiotics, anticonvulsants, and ibuprofen.² FDE should be taken seriously, as ignoring it may lead to more serious consequences.³

Intravenous immunoglobulin (IVIG) is a treatment that involves intravenously supplying a recipient with immunoglobulin proteins from the plasma of the donor to treat a variety of medical conditions, such as autoimmune, immunodeficiency, and neurologic conditions. Below, we report a case of FDE stemming from IVIG.

Report of a Case

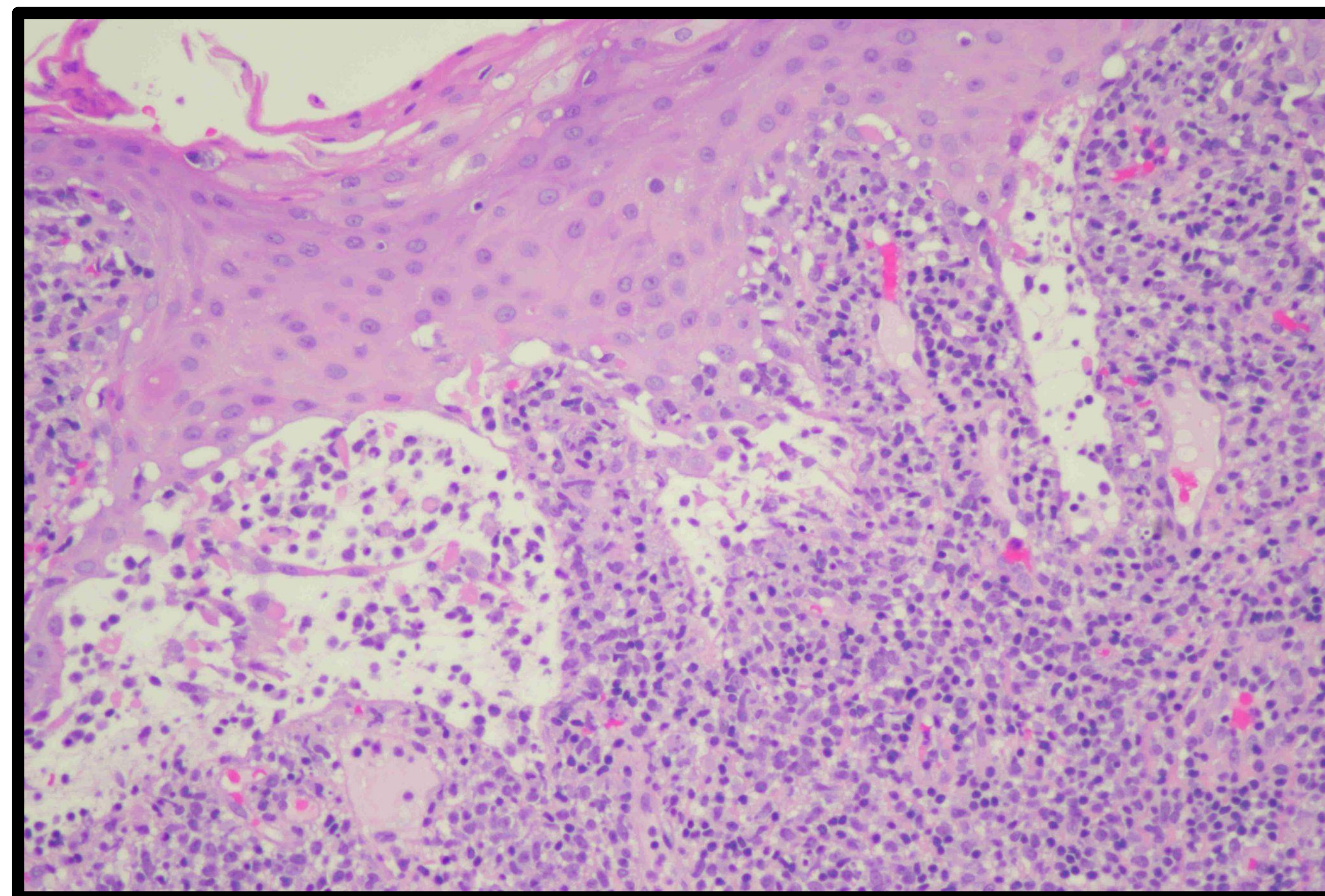
A 44-year-old male with a past medical history of specific antibody deficiency (SAD) presented to the clinic with a 12-month history of a recurring erosive eruption in the same location on the lower lip approximately monthly (Figure 1). The eruption would cause blistering that leads to painful erosions. Physical exam revealed no other areas of skin involvement and no other dermatologic conditions. No involvement of other mucosal areas or cutaneous areas was seen. Initially, it was presumed to be a herpes simplex virus and was treated as such. After three months of antiviral medication with no improvement, the patient was re-evaluated at the time of the next flare. It was at this visit that the patient stated he noticed the flares when he received IVIG for his SAD.

Figure 1. Erosive eruption with purple highlighting the area of biopsy



In an attempt to help diagnose the eruptions, a biopsy was performed. It revealed intact epithelium with diagnostic features of lichenoid dermatitis. Specifically, the epidermis is acanthotic with areas of hypergranulosis. A dense and broad inflammatory infiltrate along the dermal-epidermal junction obfuscates the basal layer and creates a “saw-tooth” pattern at the junction. Numerous acantholytic keratinocytes are seen tagged by single or multiple lymphocytes (so-called Civatte bodies). The histological differential diagnosis was between lichen planus and FDE. Clinical correlation adequately and conclusively determined the difference between the two conditions.

Figure 2: Pathology slide of the biopsy.



To determine the causative agent, the patient took Tylenol alone with a few days washout, then Zyrtec alone. Neither medication led to any recurrence of symptoms. The patient chose to stop IVIG as this eruption has been debilitating, and since its discontinuation, the eruptions have ceased entirely and have not recurred for several months. This indicates IVIG was the likely causative agent.

Discussion

The major reason why this case is intriguing is due to IVIG being a rare cause of FDE. To date, there have not been any reports in the literature with IVIG being the causative agent of FDE. There was enough evidence from the trial of Zyrtec and Tylenol being taken independently with no flare to conclude the causative agent, as the reaction would have appeared during the washout days. Components that make up IVIG include all IgG subclasses, IgA, albumin, sugar, sodium, and isohemagglutinins on a variable preparation base.⁴ Common side effects of IVIG include constitutional symptoms such as fever, chills, myalgia, and fatigue, for which the above patient was taking Tylenol and Zyrtec. This knowledge can warrant further research into which components may cause rare FDEs.

Furthermore, the presentation of the FDE is of interest. The traditional morphology of FDE lesions is characterized by round or oval erythematous patches, commonly found on the lips, hands, trunk, and genitals.⁴ In our case, the patient presented with erosive eruptions, deviating from the classical presentation, and making the diagnosis less straightforward. Although blistering is not novel to FDE, it is less common than the traditional morphology.

Conclusion

This case highlights IVIG as a previously unreported cause of FDE. Clinicians should consider IVIG among the potential triggers when evaluating cases of FDE, particularly in patients receiving immunoglobulin therapy. Further research into the underlying mechanisms of IVIG-induced FDE would be beneficial.

References

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