

Delayed Allergic Reaction in a Patient with Myelodysplastic Syndrome

Jamie Tran, Brandon Dang, Dexter Matrana, Sanjay Kamboj

Intro: Type IV drug hypersensitivity is mediated by T-cell activation. The time of symptom onset depends on the amount of T cells so clinical symptoms may not appear until T cells have proliferated enough to mount a response which could be weeks following exposure. Maculopapular eruptions are the most common form of Type IV reactions and mainly involve the trunk and extremities. Systemic symptoms are mild and can include pruritus and mild eosinophilia.

Myelodysplastic syndrome (MDS) is a hematologic malignancy manifesting as more than 1 cytopenia and dysplasia. Autoimmune diseases are common in MDS as there is T-cell dysregulation resulting in attenuation or loss of immune surveillance. In this case, we will discuss the difficulty with identifying drug hypersensitivity reactions in patients with MDS.

Case: 67M with history of MDS w/multilineage dysplasia, CKD3, and recurrent diverticulitis presented with a pruritic, morbilliform rash that appeared on the upper chest and back extending to the bilateral upper extremities for 1 day. He completed a 7-day course of Augmentin to treat diverticulitis 2 weeks prior without complication. Rash differential at the time included bacterial, viral, allergic, vasculitis, and dermatitis secondary to his MDS. Initial labs revealed an ANC of 577 and eosinophil count 320. Kidney function was at his baseline, and there was no liver enzyme involvement. He had a recurrence of diverticulitis so he was treated with Augmentin again. The following day, the rash became brightly erythematous, maculopapular, and spread further down his chest and back along with his lower extremities including soles of feet. Interestingly, his bilateral knees had a cluster of the rash compared to the rest of his legs. HIV, parvovirus antibody, treponema pallidum antibody, ANA, and ANCA were negative. A punch biopsy was positive for a morbilliform drug reaction, and a direct immunofluorescence assay was negative for vasculitis. He was treated with steroids and had improvement in the rash along with resolution of eosinophilia. Of note, he had a similar morbilliform rash 2 years prior. He was taking Levaquin as prophylaxis for his MDS for 2 months when he suddenly developed a pruritic rash along his chest, back, arms, and legs. After discontinuation of the medication, his rash resolved. A skin biopsy was not taken at the time.

Discussion: Drug allergy is commonly only considered to be the etiology of a patient's symptoms if it is associated with a close timeframe of the drug administration. However, it is important to remember that delayed reactions are possible and may even be up to two weeks after administration of the drug. In immunosuppressed patients that cannot mount a T-cell response, the delayed reaction can even occur after months. This case serves as reminder to avoid administering a drug newly prescribed within at least the past 3 months if drug allergy is still part of the differential.