Alpha Gal-Induced Anaphylaxis to Herpes Zoster Vaccination

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INTRODUCTION: Reported incidence of tick borne illness has progressively risen over the last decade. Galactose-alpha-1,3-galactose (alpha gal) allergy is a novel presentation of a tick borne illness induced by the Lone Star Tick, which is a well known vector for ehrlichiosis, tularemia, and Southern Tick-associated Rash Illness (STARI). Individuals with tick borne illnesses in the Lone Star Tick distribution of southern, midwestern and northeastern states are at greater risk for developing this condition. Three major hypotheses exist to describe how ticks might induce an IgE response through transmission of alpha gal: 1) alpha gal may be a component of tick saliva, 2) alpha gal may be residual from prior blood meal, and 3) alpha gal may be transmitted through commensal organism transmission. Clinical presentation of alpha gal allergy includes gastrointestinal symptoms, itching and urticaria, and delayed anaphylaxis. There has been one prior report of alpha gal induced anaphylaxis after administration of herpes zoster vaccination in the literature. We describe a second, unique presentation of this allergic condition observed at our institution.

CASE PRESENTATION: A 73 year old female with a past medical history of hypertension, chronic hepatitis C, and alpha gal allergy presented to our Emergency Department for near syncope after epinephrine administration for upper lip, mouth and tongue swelling experienced 45 minutes after obtaining her herpes zoster vaccination. Review of the vaccination contents revealed use of porcine gelatin - a meat product felt to have induced an IgE response in the setting of alpha gal allergy. The patient was admitted, managed with intravenous fluids, and discharged the following morning.

DISCUSSION: To increase physician awareness of alpha gal allergy and increased incidence in populations exposed to tick-borne diseases. We suggest avoiding administering the herpes zoster vaccine in patients with a history of a tick borne illness.

CONCLUSIONS: Alpha gal allergy is a relatively novel presentation of tick borne illness induced by the Lone Star Tick - commonly found in the southern, midwest and northeastern United States. We report an unusual case of alpha gal allergy with anaphylaxis induced by herpes zoster vaccination due to use of porcine gelatin.


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