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Alpha-gal red meat allergy and exposure to lone star ticks on private residential property in Southern Indiana-case reports

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Background: Alpha-gal red meat allergy is a delayed allergic reaction which occurs in individuals following the consumption of any mammalian meat or product that contain the sugar molecule galactose-alpha-1,3-galactose. Exposure to ticks in private residential property has not been well documented as a major risk factor for alpha-gal red meat allergy.

Objective: To describe the association between alpha-gal red meat allergy and repeated exposure to lone star (*amblyomma americanum*) ticks on private residential property in Southern Indiana.

Design: Retrospective case study (field observation with in-depth interview).

Settings: Two private residential homeowners with unusually high abundance of *amblyomma americanum* ticks on their property. Follow-up interviews revealed an alpha-gal prevalence of 40% (2 of 5 individuals) following repeated exposure to lone star ticks on their private residential property.

Conclusion: Exposure to lone star ticks on private residential property is an important source of alpha-gal red meat allergy in Southern Indiana. Physicians and nurse practitioners should consider the possibility of alpha gal-red meat allergy among patients who present with allergic reaction of unknown origin, especially when such patients reside on property in rural or wooded areas rich in vegetation.

Notes: