

# Contact dermatitis with aloe cross-reactivity



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## Objective:

Recognizing features of cross-reactive plant/ food species

## Introduction:

Cross reactivity is characterized by an immune response to one antigen which induces a similar response to an antigen with a similar structure.

Most patients have presenting symptoms including rhinitis, conjunctivitis, or asthma. Few pts will develop systemic symptoms. With food allergy, nausea, abd pain, and diarrhea may develop. Contact urticaria may also be present. Usually pruritis or oropharyngeal involvement will occur soon after ingestion of triggers with prompt resolution.

Contact urticaria may involve the oropharynx in sensitized individuals as in Oral Allergy Syndrome (OAS). Oropharyngeal or systemic symptoms may be present in Pollen-Food Allergy Syndrome (PFAS).

Reactions to cooked foods are less common, although possible.

## Case Presentation

A 34 y/o Caucasian female presented with history of recent flat, erythematous rash, after gardening. She was planting aloe that day. Several hours later she was cooking meatballs. She noted the rash begin on her wrist and spread to the top of her hands. She then took a Benadryl tablet and her symptoms improved. The following day she went to the gym. She felt pruritis exercising. The rash reappeared at pressure areas. Her rash progressed and she came in to the ER. She was treated and discharged with Hydroxyzine and a Medrol dose pack. She subsequently saw dermatology and Allegra 180 mg daily was added.

She had a history of angioedema and generalized rash at age 15 with ingestion of onions. Since then she has avoided onions, except for minimal usage such as onion powder in cooking. No other contact dermatitis triggers were identified in her interview. She had a history of childhood asthma, which she outgrew. She also has a history of multiple drug allergies including Cipro which caused angioedema of the face. In addition, the pt experienced rash with use of pain medications, including allergies to morphine, ibuprofen, and Percocet.

## References

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## Discussion

This pt was diagnosed with contact dermatitis and was continued on Allegra 180mg qAM as well as Zyrtec 10mg qHS. She was also started on Pepcid 20 mg daily. This was to be taken for 7 to 10 days, at which time medications were tapered. She had finished her steroid taper at time of visit. She was instructed in the use of an EpiPen 0.3 mg which was demonstrated, and a prescription was given. Avoidance of allergic triggers was recommended, along with a list of lily cross-reactive allergens.

## Conclusion

This was a case of contact dermatitis to aloe in a pt with a history of a known onion food allergy. Both triggers are part of the lily family. The lily family includes aloe vera, asparagus, chives, garlic, leek, yucca, and sarsaparilla. The pollen specific gene in lily is LLP-PG which encodes a protein of 413 amino acids. In patients with an allergy to one allergen in a family, care must be given with regard to other exposures which may result in an adverse reaction.

