



Tomato Trouble?

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Situation:

- ✓ Marie, a 62-year-old diabetic, presents with a suspicion of food allergy reactions
- ✓ Over the past six months, she has had repeated episodes of swelling. The episodes have involved swelling of the extremities, lips and tongue. On two occasions, there has been a sensation of throat tightness and she has gone to the ED. Adrenaline and antihistamines were of questionable benefit, but episodes typically persist for 24 hours to 48 hours
- ✓ There is minimal redness and tingling is initially present
- ✓ There is no itching and there is never urticaria
- ✓ Apart from episodes of throat tightness noted above, there are no lower respiratory tract symptoms. Marie is concerned that she is allergic to tomatoes, admitting she eats a lot of them. She believes she had increased her consumption of tomatoes for several days preceding each of her eight episodes of swelling. However, she has been able to consume small amounts of tomatoes at other times without difficulty

History:

- ✓ Marie has never had allergic rhinitis, asthma, eczema, or any food allergies
- ✓ There is no family history of atopy or recurrent swelling
- ✓ She has had Type 2 diabetes for 10 years and has excellent control of it with proper diet, exercise and oral hypoglycemic agents
- ✓ She is free of both microvascular and macrovascular complications
- ✓ Ramipril (an angiotensin-converting enzyme [ACE] inhibitor) was started three years ago for renal protection. She takes no other medications and has always avoided acetylsalicylic acid (ASA) and anti-inflammatory drugs due to GI upset
- ✓ Marie smoked briefly during her late teens
- ✓ She had a cholecystectomy at age 46 and a hysterectomy at age 48 for menorrhagia due to uterine fibroids
- ✓ There is no history of autoimmune disorder or lymphoproliferative disease
- ✓ Marie is otherwise well. Her weight is steady and she denies fever, chills, night sweats, or lymphadenopathy. She has no unusual bruising or bleeding, no bone pain and no increased tendency to infection. She has no arthralgias, photosensitivity, mucosal ulceration, or Raynaud's phenomenon
- ✓ Marie's physical examination is completely unremarkable. Her blood work, including complete blood count and differential, antinuclear antibodies and serum and urine immunoelectrophoresis are unremarkable

Notes on Marie

Age: 62

Presentation:


- Suspicion of food allergy
- Repeated episodes of swelling involving the extremities, lips and tongue

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What do you suspect?

- ✓ Angioedema associated with the use of an ACE inhibitor
- ✓ Angioedema associated with the use of ACE inhibitors is not allergic in nature and can occur months or years after initiation of treatment
- ✓ Angioedema results from the inhibition of bradykinin breakdown. Intermittently, often due to minor, unrecognized trauma, bradykinin production temporarily increases. Bradykinin accumulation occurs, resulting in angioedema, because its breakdown is reduced by the ACE inhibitor
- ✓ Angioedema is typically non-erythematous, non-pruritic and is not associated with urticaria. Other features of allergic reactions are absent and in this case, a history of atopy is not relevant
- ✓ Prompt recognition and discontinuation of ACE inhibitor use is essential, as fatalities have occurred when laryngeal edema causes airway obstruction
- ✓ Angiotensin receptor blockers (ARBs) may be associated with angioedema in some cases, although the risk is probably less than with ACE inhibitors. Therefore, ARBs may be an alternate therapy in patients who would clearly benefit from inhibition of the renin-angiotensin system, such as diabetics, like Marie
- ✓ The absence of any allergic history and late age of onset of symptoms are additional factors that suggest a non-allergic cause for this patient's symptoms
- ✓ Other common non-allergic triggers for angioedema, including ASA/nonsteroidal anti-inflammatory drug sensitivity, lymphoproliferative disorders and autoimmune conditions are unlikely based on the history provided
- ✓ Hereditary angioedema is unlikely because of the age of onset

Treatment:

- ✓ Marie discontinued her ramipril and apart from one minor episode involving her lip four days later, she had no further episodes of swelling
- ✓ An ARB was started for renal protection and was not associated with recurrence of angioedema.
- ✓ Marie's history was not consistent with tomato allergy. Food allergy testing was not deemed to be necessary and with reassurance, she continued to include tomatoes in her diet 

Upcoming case...

✓ **January:** Getting it Right

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