CLINICAL VIGNETTE

An Allergy to Water

Ami Philipp, MD

Aquagenic urticaria is a rare form of physical urticaria[1] with fewer than 50 cases reported in medical literature. This condition is considered under the umbrella term "urticaria" but only occurs after direct contact with any form of water. Temperature of the water does not matter and water does not cause symptoms when ingested. Typically, wheals appear within 20-30 minutes following exposure to water. After removal from water source, they will fade away within 30-60 minutes. The wheals are pruritic and can cause discomfort. Systemic symptoms are rare but have been reported.[2] Here is a case of aquagenic urticaria that has negatively affected a patient's life.

Case

A 40-year-old female with past medical history of hypothyroidism on levothyroxine presents with urticaria that began almost ten years ago with any water exposure. She initially noticed hives after showering and symptoms progressed to being unable to tolerate water touching her skin. She can drink water and does not report angioedema. She has never experienced anaphylaxis. The water temperature does not matter, with both hot and cold water causes symptoms. She thinks hot water is worse. Treatment has included periodic oral and intramuscular steroids for flares. She is currently taking loratadine 20mg in the morning, cetirizine 10mg in the evening and Diphenhydramine 50mg in the evening on days of shower. She can only take a shower 2 days a week and has symptoms about one minute into showering. It has become so debilitating that she needs to take lorazepam 0.5mg prior to the shower because she will have panic attacks thinking about breaking out in hives. She has never needed long periods of steroids for this condition. She was last in the ocean about 7 years ago and did not notice hives. She does not have an Epinephrine autoinjector.

Nothing besides water causes her to have hives. She once got hives after taking hydrocodone acetaminophen but otherwise has no other concerns for food or drug allergy. She has not tried steroid creams for her hives.

She denies any shortness of breath, swelling or chest pain associated with the hives, however, reports significant anxiety and distress with the anticipation of hives. She states that this has negatively affected her quality of life and feels it limits her ability to function.

She does not have any family history of urticaria or angioedema and social history is noncontributing.

Upon exam, she had normal vital signs and her general exam was unremarkable. No urticarial lesions were present. She deferred a water compress test or test for dermatographism. No pertinent lab testing obtained.

Treatment of aquagenic urticaria is similar to treatment of other types of urticaria including spontaneous and idiopathic. Often, doses of Histamine 1 (H1) antihistamines and Histamine 2 (H2) blockers are increased for adequate control. Her regimen was changed to fexofenadine 180mg two tabs in the morning, cetirizine 10mg 2 tabs at night, Hydroxyzine 50mg at night as needed for showers and famotidine 20mg twice a day.

Treatment options tend to be limited when trying to increase water exposure. Upon review of the literature, a case report showed complete resolution with petrolatum-containing cream before showering.[1] This product also contains dimethicone, a type of silicone oil with hydrophobic properties, thus serving as an added layer of skin protection. This was discussed but she was reluctant to try this, because she wanted to shower to be clean and felt barrier ointments would interfere.

We also discussed increasing the salinity of the water, which had not been previously tried. Saline irrigation solution was prescribed to be used when bathing, as well as an epinephrine autoinjector. Aquagenic urticaria patients can be at risk of hypotension if suddenly exposed to water. A prescription for additional epinephrine autoinjectors was given to the patient and she was taught how to administer the medication.

No additional tests done as they are not typically necessary when seeing patients with Aquagenic urticaria.

The diagnosis is often confirmed with 35 °C water compress.[3] After discussion, it was not necessary based on her history and the significant anxiety related to this provocation.

Further treatments include possible omalizumab[4] and cyclosporine for refractory hives. This has not been studied extensively given the rarity of the condition.

Update

About 6 months later, the patient has reported about 75% of her symptoms have improved with improved second-generation antihistamine use. She currently does saline baths intermittently

with quick showers which is a great improvement from what she was previously able to do.

Xolair (omalizumab) was discussed again but determined unnecessary since she has improved significantly. We plan to conduct follow up appointments every 6 months or sooner if her symptoms worsen.

REFERENCES

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