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AN UNUSUAL SYNCOPE CASE

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ABSTRACT

Mrs. R. Kamatchi, 83 years old woman complaining of pruritic "hives" (small red bumps) one day ago on trunk and thighs accompanied by nausea and light-headedness. Her left eyelid also became swollen. Symptoms occurred at rest and lasted two hours. The swelling of her eyelid lasted a bit longer than the bumps on her trunk and thighs. Her light-headedness represented presyncope. She had many similar episodes in the past six months. During one episode, she had syncope and was hospitalized. She was diagnosed with orthostatic hypotension.

KEYWORDS: Urticaria, Angioderm, Pruritic Hives

INTRODUCTION

Syncope, also known as **fainting**, **passing out** and **swooning**, is defined as a short loss of consciousness and muscle strength, characterized by a fast onset, short duration, and spontaneous recovery. It is due to a decrease in blood flow to the entire brain usually from low blood pressure. Some causes have prodromal symptoms before the loss of consciousness occurs. These symptoms may include light-headedness, sweating, pale skin, and blurred vision, nausea, vomiting, and feeling warm, among others. Syncope may also be associated with a short episode of muscle twitching. If a person does not completely lose consciousness and muscle strength it is referred to as presyncope. It is recommended that presyncope be treated the same as syncope.

PAST MEDICAL HISTORY

Osteoarthritis: hip arthroplasty 10/04, Osteoporosis, Labyrinthitis, Colon cancer stage II: 2000 *Medications* fluoxetine (10mg daily), fosamax (70mg weekly), MVI daily

Her fluoxetine was begun recently, thinking that her recurrent presyncope could be caused by depression.

ROS: nausea/emesis and dizziness with pruritic rash, some memory impairment, no fevers, no headache, no palpitations, no chest pain or dyspnoea

SOCIAL HISTORY

Her family believes that she has been under unusual emotional stress and believes that stress is contributing to her current presentation. She moved from her home to a life care community six months ago and has been anxious and unhappy.

CASE PRESENTATION

Physical Examination

BP: 150/68 (not orthostatic)

Cardiac: regular rate in 80s, normal exam

Skin: patch of erythema on back and trunk beneath bra strap, erythema over beltline, red papules on lower anterior chest, ecchymoses on shoulders and legs. The rash seen on exam is different than the transient rash that she had one day ago.

Laboratory Findings

- Normal chemistries and blood counts
- Positive ANA, 1:160 (may be unrelated to her main diagnosis)
- ESR normal

PATHOPHYSIOLOGY

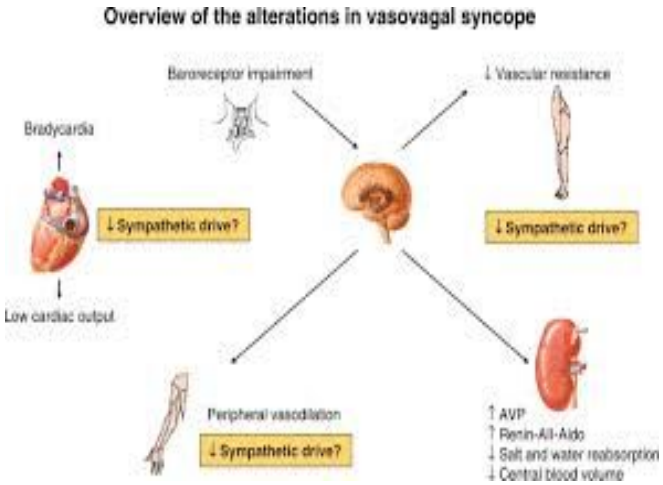

Figure 1

DISCUSSIONS

"Hives" Urticaria: An urticarial wheal is fleeting; superficial skin is typically raised and red at the periphery, and pruritic.

Figure 2

Angioedema: The sudden swelling of dermis and sub cutis; it frequently involves the mucous membrane and resolves over 24-72 hours. Angioedema is more painful than urticaria.

Figure 3

Urticaria and Angioedema have been recognized since antiquity.

Natural History of Urticarial Disease

Urticaria is sometimes seen in older adults. In older adults, urticaria and Angioedema often indicate adverse drug reactions.

- **Age of diagnosis:** 0-9 yrs or 20-40 but ~30% diagnosed after age 40
- **Acute urticaria:** lasts less than 6 weeks
- **Chronic urticaria:** last longer than six weeks

As in many other conditions, the disease presentation of urticaria is different in older adults. Older adults with urticaria have more severe presentations and are more likely to also experience Angioedema (50% of adults with urticaria). Urticaria with Angioedema is also more likely to persist over time.

Classification of Urticaria

- IgE dependent (Allergic)
  - Antigen sensitivity
  - Physical stimuli
- Complement mediated
  - Hereditary Angioedema
- No immunologic (triggered by some drugs)
- Idiopathic

A no immunologic urticaria resulting in mast cell degranulation (and release of histamine) can be triggered by

many mechanisms including antigens, acetylcholine, the complement cascade, narcotics, physical stimuli, prostaglandins, and beta adrenergic agents...

Physical Urticaria

Dermatographism (sometime called dermographism) is the most common physical urticaria, occurring in 1-4% of the population, mainly in young adults. Appears and then fades within 30 minutes. It rarely has systemic manifestations.

Figure 4

Pressure Urticaria

This appears 1-6 hours after sustained pressure on skin and can be associated with Angioedema and fevers.

Cholinergic Urticaria

An increase in the core body temperature causes acetylcholine-mediated sweating. A hot shower, emotional stress, or exercise can bring on the temperature elevation needed to trigger this eruption. This results in dizziness, headache, syncope, flushing, wheezing, palpitations, nausea, and diarrhea. Wheals are much smaller than seen in other forms of urticaria.

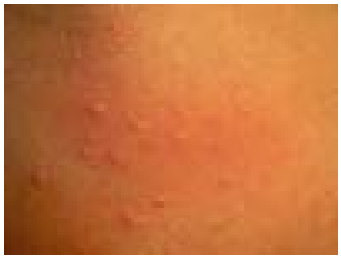

Figure 5

The systemic features of cholinergic urticaria can be serious. When systemic features are prominent, the disorder can be confused with exercise-induced anaphylaxis. However, in exercise-induced anaphylaxis, an antigen or drug is usually required as well as exercise in order to trigger the syndrome. The response to exercise will vary according to other

Conditions but can be life-threatening.

Other Types of Urticaria

These types of physical utricaria are uncommon and their mechanism is unclear.

- Cold
- Solar

- Vibration
- Water (Aquagenic)
- Stress (Adrenergic)

Treatment for Physical Urticaria

- Remove precipitating cause if possible
- H1 blockers
- H2 blockers
- Steroids (internists more likely to use steroids than allergists, 29% v. 6%)
- Immunosuppression for severe cases
- For Cholinergic urticaria: cold water is sometimes helpful

For cholinergic urticaria, no sedating H1 blockers are now the standard of care. Sedating antihistamines are particularly risky for older adults due to CNS side effects.

PATIENT FOLLOW UP AND CONCLUSIONS

Follow-Up

The patient was prescribed loratidine 10 mg daily and symptoms have not recurred in the past three months. She is also happier in her new residence and likely had pressure urticaria and cholinergic urticaria.

People with one type of physical urticaria often will have other types as well. These entities are more common in younger adults, but clearly can also be seen in older adults.

CONCLUSIONS

- Physical urticaria includes a wide array of disorders.
- Urticarial disease is often quite treatable.
- There is a lot we don't understand about how physical stimuli and emotional stress affect the body.

This patient's syncope could be diagnosed and treated without a tilt-table test, electrophysiology study, EEG, or any other medical test.

Although geriatricians see clinical syndromes that are at times quite treatable, sometimes the actual path physiology can't be described. This scenario is common in environmental medicine. Physical stimuli affect the body through mechanisms which are not yet well-defined.

There is a need for more research on environmental illnesses just as there is a need for more research on diseases of older adults and changes of disease presentation with aging

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