

Case of postural urticaria in a 14-year-old girl

Sofianne Gabrielli,¹ Michelle Le,² Elena Netchiporouk,² Moshe Ben-Shoshan¹

¹Division of Pediatric Allergy and Clinical Immunology, Department of Pediatrics, McGill University Health Centre, Montreal, Quebec, Canada
²Dermatology, McGill University Health Centre, Montreal, Quebec, Canada

Correspondence to
 Sofianne Gabrielli;
 sofianne.gabrielli@mail.mcgill.ca

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SUMMARY

Chronic inducible urticaria (CIndU) is a subset of chronic urticaria that has an identifiable trigger. We present a case of postural urticaria induced by change in position in a 14-year-old girl. The patient's CIndU was not adequately managed with both antihistamine and omalizumab treatment, indicating a recalcitrant form of CIndU.

BACKGROUND

Chronic urticaria (CU) is defined by the presence of wheals and/or angioedema for more than 6 weeks.¹ CU is classified as spontaneous (CSU) or inducible (CIndU) urticaria, based on the ability to identify a trigger.¹ CIndU, which can be classified into physical and non-physical forms, is less common than CSU and can be diagnosed by provocation test. We describe the case of a 14-year-old female patient with postural urticaria induced by changing from a seating to standing position. To our knowledge, there is only one other case of postural urticaria described in a teenage boy.²

CASE PRESENTATION

A 14-year-old female patient presented with a 2-year history of intermittent hives on her bilateral legs, which developed 20 min after standing. The patient also described symptoms of tingling in her legs prior to the development of the hives. The symptoms usually resolved spontaneously after a few hours. In addition, the patient reported spontaneous hives almost daily, not related to an identifiable trigger. The patient was otherwise healthy and not taking any medication. The patient's father reported a history of spontaneous urticaria in childhood which resolved, although he still rarely experiences episodes of hives.

INVESTIGATIONS

On examination, the patient developed prominent vasculature (livedo reticularis) and urticaria on her bilateral legs 20 min after changing from a seated to a standing position (figure 1). The patient had urticarial wheals on most of the calf area that extended up to the knees. During the challenge, the patient was standing and walking, but not exercising. The lesions were not consistent with venostasis. Furthermore, there was no indication of postural hypotension. When seated, the patient's blood pressure was 113/77 and her heart rate was 102. On standing, the patient's blood pressure was 101/82 and her heart rate was 118. All laboratory tests, which included a complete blood count, thyroid-stimulating hormone, antithyroid peroxidase IgG, tryptase and total IgE, were within normal limits.

As per consultation with dermatology, biopsy of the urticarial wheal was not taken as the lesions were not fixed. The patient's weekly Urticaria Activity Score (UAS7) in the week prior to exam was 9.

TREATMENT

Given poor response to standard doses of second-generation antihistamines, the patient was treated with bilastine 40 mg twice daily. After 1 year, due to poor response to treatment, the patient was placed on 300 mg of omalizumab administered once per month.

OUTCOME AND FOLLOW-UP

Over the period of 1 year, the patient did experience improvement in her spontaneous urticaria symptoms, with her UAS7 decreasing from 38 to 9 over a period of 2 years. However, there was no improvement in the symptoms related to change in posture.

DISCUSSION

The mechanism of action of postural urticaria in this patient is unknown. It was previously hypothesized that change in venous pressure or blood flow volume from sitting to standing may induce the release of mediators such as acetylcholine that may induce hive development.² The management of postural urticaria in our patient was not clear as she did not improve with antihistamines, nor with the addition of omalizumab treatment. It is possible that the patient may gain better control of her hives with other management strategies such as a higher dose of omalizumab or a different biologic, such as ligelizumab.^{3 4} Clinicians should be made aware of



Figure 1 Livedo reticularis and urticaria development on leg of patient after standing for 20 min.



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Case report

Learning points

- The presentation of postural urticaria may be indicative of a more recalcitrant form of chronic inducible urticaria that may not be adequately controlled with guideline-recommended management strategies, which include antihistamines with the addition of omalizumab.
- In patients where postural urticaria is suspected, we suggest a provocation test of standing for 10–20 min to confirm the diagnosis.

this presentation of postural urticaria given that it may reflect a more recalcitrant form of CIndU. We suggest that a provocation test consisting of standing for 10–20 min should be used to confirm the diagnosis of postural urticaria.

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conceptualisation and design, methodology, investigation, analysis, supervision and editing of the draft of the case report. ML contributed to the analysis, supervision and editing of the draft of the case report. EN contributed to the analysis, supervision and editing of the final draft of the case report.

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