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Recurrent Facial Urticaria Following Herpes Simplex Labialis

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Abstract

We describe recurrent acute right-sided facial urticaria associated with herpes labialis infection in a middle-aged female patient. Antiviral medications and antihistamines not only successfully cleared the herpes infection and urticaria but also prevented further recurrences.

Keywords: *Acyclovir, desloratidine, face, herpes, urticaria*

Introduction

Acute and chronic urticaria may be triggered by infections. Studies have shown that bacteria and viruses activate the complement system via antigen or antibody–antigen complexes. This in turn leads to the formation of anaphylatoxins. These cause degranulation of mast cells.[1,2] The common infectious triggers are well documented in urticaria with *Helicobacter pylori*, streptococcus and viruses.[3] Acute urticaria can be triggered by Hepatitis (A, B, and occasionally C) in adults. In children, it is frequent due to respiratory syncytial virus, adenovirus, influenza virus, parainfluenza virus, adenovirus, CMV, enterovirus, Epstein-Barr virus, Parvovirus.[4] A German study showed association of Noroviruses with acute urticaria in two patients.[5] Recent epidemic of chikungunya infection in Indian, few patients presented with urticarial eruptions.[6]

Case Report

An otherwise healthy 50-year-old female school teacher came for consultation of acute onset of pruritic rashes on her face. Clinical examination revealed acute urticaria involving only right side of face. Lesions of herpes labialis were also noted on her upper lips. There was no antecedent history of fever and drug intake but she travelled for few hours in sunlight for few hours and had a lot of physical and mental stress during that period. There was no history of urticaria, asthma and drug eruptions or contact dermatitis or food allergy in her past or family. She experienced “fever blisters” a few years ago with an episode of acute pharyngitis. She attained menopause 6 years ago and was not receiving any drugs including hormone replacement therapy. She was neither using any cosmetic creams on face nor did she ever visit a beauty parlor. There was no new soap or shampoo. Upper lip threading was never done. Her investigations including blood sugar, complete blood counts, and urinalysis were normal. Her urticaria resolved with hydroxyzine. We were not sure at this moment if the urticaria and herpes labialis were related.

Two months later, she again came with the similar presentation but her major concern this time was painful eruptions on upper lips at the same location as that in the past. Acute urticarial eruptions followed 3 days after the onset of herpes labialis. There was tender right submandibular

lymphadenopathy. There were no lesions in oral cavity. The only antecedent complain was fatigue for 2 days. Drug history and contact dermatitis were unlikely possibilities. Consultation with internist physician did not reveal anything abnormal systemically. Sun exposure and stress were not apparently associated with this episode. She was again investigated for her blood counts, blood sugar, thyroid function tests, antinuclear antibodies, and HIV antibodies, which turned out to be normal. Tzanck smear from vesicular fluid showed a multinucleated giant cell. Gram stain from vesicles was negative for bacteria. There was rise in anti-herpes simplex virus (HSV) 1 IgG antibodies (7.9 units: >1 units was positive, Elisa0 method) but IgM (0.5 units) was normal. We prescribed her with oral roxithromycin 150 mg bid, paracetamol 500 mg tid, desloratidine 5 mg od, and acyclovir 200 mg 5 hourly and asked her to follow after 5 days. She did not come for follow up. On telephonic inquiry, she told that there was dramatic resolution in herpetic lesion on lips as well as the urticaria just within 3 days and she did not complete the course of medications. We requested her to report as soon as she gets any of similar complains in future.

Again after 2 months, she came with the similar presentation. Herpes simplex labialis of 5 days duration on upper lips had started forming crusts and acute urticaria consisting of 1–4 cm erythematous plaques on right side of face since 1 day [Figure 1]. The individual weals of urticaria did not last more than a few hours, even without medications, as per the history narrated by the patient. There were no papular or vesicular components within the individual weals. There were no weals or other relevant eruptions elsewhere on the body.

There was minimal enlargement of right submandibular lymph node. Tzanck smear was negative but anti-HSV 1 IgG antibodies were strikingly raised (10 units). She did not consent for a skin biopsy of urticarial weal.

We started oral acyclovir 200 mg 5 hourly for 7 days, desloratidine 5 mg daily and topical mupirocin ointment for lip lesions. There was complete clearance of urticarial and herpetic lesions at the end of 1 week. We followed her for next 1 year. She remained healthy and there were no recurrences, either of urticaria or herpes simplex labialis.

Discussion

Diagnosis of herpes simplex labialis and acute urticaria during all three episodes in this patient was certain. Acute urticaria is triggered by viral infections and documented more frequently in children than in adults. Upregulation of cytokines with the acute phase response, leading to temporary state of enhanced mast cell releasability is the probable mechanism for aggravation of urticaria during viral infections.[4]

We have recently reported successful treatment of chronic urticaria associated with recurrent genital herpes simplex infection with antiviral therapy in two patients.[7]

In this patient, we documented three serial episodes of urticaria following herpes simplex labialis infection on upper lips. In all the episodes, it was striking that urticaria erupted only on the right side of face. Furthermore, there was a consistent temporal relationship between urticaria and herpes infection in our apparently healthy patient. All episodes of urticaria and herpes simplex infections also dramatically responded to appropriate antiviral and antihistamine therapy.

We believe that the inciting event for urticaria during each episode was herpes simplex infection. Predisposing factors for the latter in our case were not clear though initial episode suggested it to be due to sun exposure and stress. During next two episodes, there was apparently none. We are unsure whether fatigue is the cause or effect of herpes simplex infection in the second infection.

What was most intriguing in our patient was right-sided urticaria each time following herpes simplex labialis infection. We do not know explanation of such characteristic clinical finding. We could not find any relevant citation of similar presentation on pubmed in English language, to the best of our knowledge.

Ruocco *et al.* reported in their recent review,[8] a unifying concept of immunocompromised districts

following lymphoedema, herpes infection, and otherwise damaged sites, wherein the affected anatomical locations becomes immunologically compromised even in healthy patients and are susceptible for immune dysregulation and presents in future with immunological cutaneous reactions in the same anatomical zone. Herpes-infected sites are known to follow clinically and predispose to the occurrence of tumors, lichen planus-like dysimmune reactions, secondary infections with bacteria and viruses, and comedonic microcystic reactions. Herpes zoster is more prevalent than herpes simplex to induce such Wolf's isotopic responses. We believe, this concept may offer some explanation for strange clinical presentation in our patient.

However, urticaria following herpes simplex infection in the same anatomical location is hitherto unreported on pubmed in English language to the best of our knowledge.

We thus present an interesting finding of recurrent facial urticaria and herpes simplex infection for its clinical rarity.

Footnotes

Source of Support: Nil

Conflict of Interest: Nil.

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Figures and Tables

Figure 1



Herpes simplex labialis of on upper lips with crust formation and urticarial weal on right side of face in our patient

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