

Chronic Spontaneous Urticaria: A Questionnaire Survey

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Abstract

Background: Chronic spontaneous urticaria (CSU) is urticaria persisting for more than 6 weeks with no identifiable provoking cause and associated with significant disability.

Objectives: The aim of this study was to survey patients with CSU with a view to establishing prognosis, efficacy of treatments, suspected causality, and effects on lifestyle.

Methods: One hundred seventy-four patients with CSU were seen between 2003 and 2013. A questionnaire was sent to all, and 101 participated.

Results: The ratio of female to male participants was 4:1. The mean age of onset was 36 years. The average duration of symptoms was 8.8 years, with a range of 0.33 to 55 years. Seven percent of participants had autoimmune thyroiditis, and another 17% had various other autoimmune diseases. Common symptoms were pruritus, disturbed sleep, and anxiety. Slightly more than 70% had missed work or school. Most were frustrated at the lack of efficacy of treatments.

Conclusions: CSU is frequently associated with a history of autoimmune diseases. It may persist for decades and causes significant disruption to lifestyle.

Keywords

chronic urticaria, autologous serum skin test, quality of life, questionnaire survey, autoimmune urticaria, treatment, prognosis, dermatology, immunology, chronic spontaneous urticaria

Introduction

Chronic spontaneous urticaria (CSU) is defined as urticaria persisting for more than 6 weeks with no inducible cause. Autoimmunity is believed to be the basis for chronic urticaria in about 40% of patients, while food allergy-induced chronic urticaria is rare, and pseudoallergy food sensitivity, as a cause of chronic urticaria, remains controversial.

In this questionnaire study, we sought to characterize the experiences of patients seen in the Division of Dermatology at the University of Saskatchewan over a 10-year span.

Methods

Selection of Participants

One hundred seventy-four patients with CSU seen between 2003 and 2013 were identified in our database. The same dermatologist (P.R.H.) had assessed all patients.

Patients with physical urticaria were excluded, although patients with associated dermatographism were included. A questionnaire was mailed to all the patients with a postage-paid return envelope. When there was no response, 2 additional invitations to participate were mailed, and an attempt was made to contact the patient by phone. Forty-five patients

were lost to follow-up, 25 declined to participate, and 3 were deceased. There was a 78% participation rate (101 questionnaires received out of 129 able to reply).

This retrospective chart review and questionnaire study was approved by the University of Saskatchewan's Behavioral Research Ethics Board.

Results

Demographics

Of the original cohort of 174 patients with CSU, the ratio of female to male participants was 3:1. Of the 101 respondents (participants), this ratio was 4:1. The mean age of onset of urticaria was 36 years, with a range of 1 to 88 years. The average duration of symptoms was 8.8 years (range, 0.33–55

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years). Seven percent of the 101 participants had autoimmune thyroiditis, and a total of 17% had other various autoimmune diseases (diabetes, thalassemia, vitiligo, celiac disease, discoid lupus, lichen planus, adult-onset Still's disease, rheumatoid arthritis, Kawasaki syndrome, psoriasis, and inverse psoriasis). One patient had a tooth abscess and another had had a tooth surgically removed. Both noted the onset of urticaria coincident with the dental procedures, but in both cases, the urticaria had been present for 5 and 4 months when seen.

Autologous Serum Skin Test (ASST)

The ASST, as a possible indicator of autoimmune urticaria, had been performed on 139 members of the original cohort of 174 patients, with positive results in 42.02% of those tested. The ASST had been performed in 89 of the 101 respondents, with positive results in 45%.

Activity of Urticaria

Forty-nine participants were still having hives, and 30 of these individuals (62%) had hives more than once per week. Twelve of these patients had positive ASST results, 17 had negative results, and 1 had not been tested.

Symptoms and Triggers

Participants were bothered by pruritus (85%); physical appearance, including facial swelling (54%); disturbed sleep (50%); anxiety (39%); and fear of death (10%). When asked about suspected causes of their urticaria, 48 participants (48%) believed autoimmune causes to be responsible. This is likely because the patients were told of their positive ASST results. Thirty-two participants (32%) were unsure of the cause of their urticaria, while others suspected stress (22%), environmental factors (19%), food (13%), heat (11%), pressure (9%), medications (8%), and cold (5%). For those individuals who considered food to be a cause, food colorants and gluten were most common, at 39% and 31%, respectively. Nuts, peanuts, tomatoes, and pork were all suspected 23% of the time, whereas chicken, shellfish, fish, and beef were each suspected 8% of the time.

Experiences Over the Past Month Directly Related to Urticaria

Of the 101 participants, 14% had visited their family physicians, and 4% had visited emergency departments. Twelve percent had received intravenous treatment for their urticaria, 1% had to administer an epinephrine autoinjector, and 11% had received prednisone or other oral corticosteroids while in the emergency department. Additionally, 11% had experienced difficulty breathing, and 23% had experienced larger swellings (angioedema) that lasted for several days.

Seventy-one percent had missed work or school because of their urticaria.

When asked how much CSU negatively affected satisfaction with their life, 31 participants claimed that it was "very much" affected, 20 claimed that it was affected "a lot," 27 selected "a little," and 20 selected "not at all." Three participants failed to complete this section of the questionnaire. With regard to feelings of frustration, 35 participants were "very much" frustrated, 18 "a lot," 21 "a little," and 19 "not at all." Eight participants failed to answer this question.

Treatment

All patients were initially treated with antihistamines. Treatment success was determined by improvement of symptoms. The data were additionally separated as to their ASST status. All ASST-positive patients began treatment with antihistamines and were progressed to other medications (steroids, immunosuppressants) only when antihistamines failed to alleviate the CSU. With regard to the 40 ASST-positive individuals, 13 (33%) were successfully treated with antihistamines and did not require intravenous immunoglobulin (IVIG). It was also found that corticosteroids such as prednisone and cortisone were considered effective treatments by 7 participants (18%); however, the administration of corticosteroids was likely due to emergency department visits during severe reactions. Twenty-one ASST-positive patients with severe uncontrollable hives were treated with IVIG. Eighty-five percent of the patients treated with IVIG had increased satisfaction of life, with 13 of these patients free of urticaria and no longer receiving IVIG. Three patients did not improve on IVIG, but all 3 responded to methotrexate.

The 49 ASST-negative participants, as well as 12 patients who were not tested, were treated with antihistamines. Nineteen of these individuals (31%) were treated with antihistamines alone and found adequate relief of their urticaria. In a further 40% of these participants, improvement required a combination of treatments by including prednisone. Prednisone was used in one-fifth of the participants by emergency department physicians. In 23% of ASST-negative participants, no treatment was found to give any relief of urticaria. ASST-negative patients were not treated with either IVIG or immunosuppressants.

Discussion

If the ASST is used as an indicator of the autoimmune form of urticaria, the prevalence of the autoimmune variant of CSU was 42% in the total CSU population tested and 45% of our participants. These values correspond with those reported in the literature, with a prevalence of autoimmune CSU ranging from 40% to 45%.¹⁻³ The majority of our CSU participants were female.

Antithyroid antibodies were found in 7% of the participant population, which is slightly lower than what was found

in a Canadian study by Leznoff et al⁴; 12% of their CSU population of 140 had antithyroid antibodies. This was in comparison with their control group, which had a 5.6% prevalence of the antithyroid antibody.

We found that the effect of CSU on participants' daily lives was significant, causing 70% of individuals to miss work or school. This was in addition to the symptoms of pruritus, facial swelling, disturbed sleep, and anxiety.

Thirty-percent of participants found that antihistamines alone effectively controlled their hives. In the ASST-positive patients, IVIG was a highly effective treatment when antihistamines failed to work, and immunosuppression with methotrexate was successful in 3 patients who did not respond to IVIG. Half of all participants were unhappy about the treatments currently available.

None of the patients had received omalizumab, which was unavailable to the patients in this study.

CSU is challenging both for physicians and patients. It is seldom life threatening, but it does have a considerable impact on quality of life.⁵ This study highlights the need for more effective treatments. The anti-immunoglobulin E biologic agent omalizumab has been shown to be effective in treating chronic urticaria, achieving significant suppression in about 60% of patients and complete suppression in about 40% of patients, when used together with antihistamines.⁶

Although these results are promising, the availability of efficacious treatments remains elusive.

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