

Original Research Article

A descriptive study of clinico-epidemiological profile of chronic urticaria from a tertiary care center

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Received: 11 December 2020

Revised: 06 January 2021

Accepted: 07 January 2021

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ABSTRACT

Background: Chronic urticaria is defined as wheals occurring at least twice weekly for more than six weeks. Exact etiology of chronic urticaria is not known. Only a few studies are available about the clinical and epidemiological profile of chronic urticaria from our part of the country.

Methods: A descriptive study was conducted among one hundred consecutive chronic urticaria patients attending the dermatology out patient department of government medical college, Kozhikode to find out the clinical and epidemiological profile of chronic urticaria.

Results: Out of 100 patients 25 (25%) were males and 75 (75%) were females with a male to female ratio of 1:3. Angioedema was seen in 63 (63%) patients and dermographism in 53 (53%) patients. Food was the aggravating factor in 34 (34%) patients, exposure to house dust in 28 (28%), sweat in 36 (36%), pressure in 37 (37%), sunlight in 17 (17%), drugs in 22 (22%), stress in 36 (36%), heat in 13 (13%), water in 20 (20%), cold in 5 (5%), infection in 31 (31%) and infestations in 20 (20%) patients.

Conclusions: Chronic urticaria is common in females. Angioedema and dermographism are seen in more than half of the patients with chronic urticaria. Most common aggravating factors of chronic urticaria were pressure, sweat, stress, food, infections and exposure to house dust.

Keywords: Chronic urticaria, Clinico-epidemiological, Descriptive study, Tertiary care center

INTRODUCTION

Urticaria is a chronic mast cell mediated disease characterized by itchy, evanescent, erythematous or pale swellings of the dermis which resolve within 24 hours. When there is involvement of deep dermal, subcutaneous or sub mucosal tissue it is called angioedema.¹ Angioedema is usually not itchy, may be painful, poorly defined, pale or normal in color. It is associated with urticaria in 50% of the patients.² Based on the duration of disease urticaria is classified into acute and chronic. If urticaria is present daily or almost daily for six weeks it is called acute urticaria and if urticaria is present more than six weeks it is called chronic urticaria.³ Chronic urticaria is classified into chronic spontaneous urticaria and

inducible urticaria depending on the underlying etiological factors. Chronic spontaneous urticaria include, chronic idiopathic urticaria and chronic autoimmune urticaria. Chronic autoimmune urticaria can be associated with autoimmune thyroid disease which is detected by autologous serum skin test.^{4,5} It is very difficult to find out the exact cause of urticaria. Hence, we decided to conduct a study to evaluate the clinical and epidemiological features of chronic urticaria.

METHODS

A descriptive study was conducted to find out the clinical and epidemiological profile of chronic urticaria. The study group included 100 consecutive patients with

chronic urticaria attending the dermatology out patient department of government medical college, Kozhikode from June 2013 to December 2013. Pregnant and lactating women were excluded from the study. Institutional research and ethics committee approval were obtained for conducting the study.

A preformed questionnaire was used to collect detailed history of disease onset, duration, morphology and distribution of chronic urticaria. Severity of itching and number of wheals were noticed and urticaria activity score (UAS) was calculated by adding pruritus and wheal score. Duration of individual wheals, presence of angioedema, systemic symptoms like malaise, headache, abdominal pain, arthralgia and wheezing were noted. All possible aggravating factors like heat, cold, pressure, sweating, sunlight, friction, exercise, food, drugs, infections, implants and stress were enquired. History of atopy, thyroid disease, other systemic diseases and treatment taken were documented. History of premenstrual exacerbation and remission during pregnancy were noticed. Family history of urticaria, angioedema, atopy, thyroid disease and other systemic diseases were enquired.

General examination included pallor, jaundice, clubbing, lymphadenopathy and thyroid swelling. A search for focus of infection such as caries, sinus, ear and respiratory infection were performed. In the dermatological examination morphology and distribution of the skin lesions and presence of dermatographism were noted. All the patients were completely investigated to find out any underlying causes for urticaria. Complete blood count, erythrocyte sedimentation rate, urine analysis, stool for ova and parasites, anti-streptolysin O titer, random blood sugar, renal and liver function test, hepatitis B antigen, rheumatoid factor and antinuclear antibody were done in all patients.

Descriptive analysis including mean and frequencies were carried out for continuous and categorical variables of chronic urticaria. Statistical analysis was performed using statistical package for the social sciences version 18.

RESULTS

Out of 100 patients with chronic urticaria, 25 (25%) were males and 75 (75%) were females with a male to female ratio of 1:3. Age of patients ranged from 14 to 70 years with mean age of 35 years. Duration of chronic urticaria ranged from 2 months to 30 years with 25 (25%) patients showing a duration of 2 to 3 years. Fifteen patients (15%) had urticaria lasting more than 10 years. Mild pruritus was seen in 7 (7%) patients, moderate pruritus was seen in 25 (25%) and severe pruritus in 68 (68%) patients. Wheals more than 50 were seen in 65 (65%), 20-50 wheals were seen in 12 (12%) and less than 20 wheals in 23 (23%) patients.

Angioedema was seen in 63 (63%) and dermatographism in 53 (53%) patients. Duration of individual wheal was 30 minutes in 16 (16%) patients and one hour in 19 (19%) patients. Eighty patients (80%) had wheals which occurred daily per week. Diurnal variation of urticarial wheals was not seen in 35 (35%) patients. Out of the 65 patients who showed diurnal variation 43 (66.2%) had wheals at night. Whole body was involved in 17 (17%) patients and trunk and limbs were involved in 6 (6%) patients. Sparing of palms and soles were seen in 15 (15%) patients.

Food was the aggravating factor in 34 (34%) patients, exposure to house dust in 28 (28%), sweat in 36 (36%), pressure in 37 (37%), sunlight in 17 (17%), drugs in 22 (22%), stress in 36 (36%), heat in 13 (13%), water in 20 (20%), cold in 5 (5%), infection in 31 (31%), dental caries in 36 (36%), and infestations in 20 (20%) patients (Figure1). Premenstrual exacerbation was seen in 11 (11%) patients and history of exacerbation during pregnancy was noticed in 6 (6%) patients. Atopy was seen in 15 (15%) patients followed by thyroid disorder in 13 (13%) and autoimmune disease in 5 (5%) patients (Figure 2). Family history of urticaria was seen in 15 (15%) patients. Comorbidities observed in the family of patients were atopy in 25 (25%), thyroid disorder in 15 (15%), diabetes in 25 (25%) patients and hypertension in 25 (25%) patients (Figure 3).

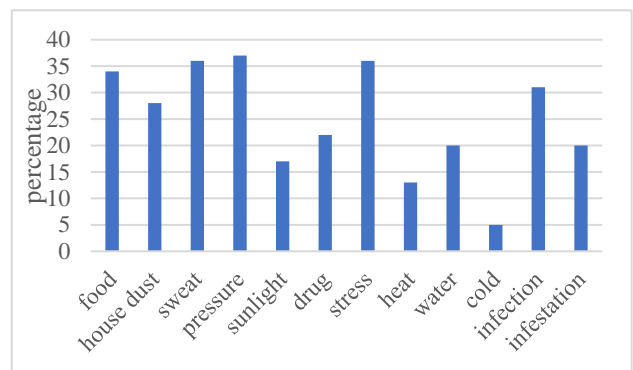


Figure 1: Exacerbating factors in chronic urticaria.

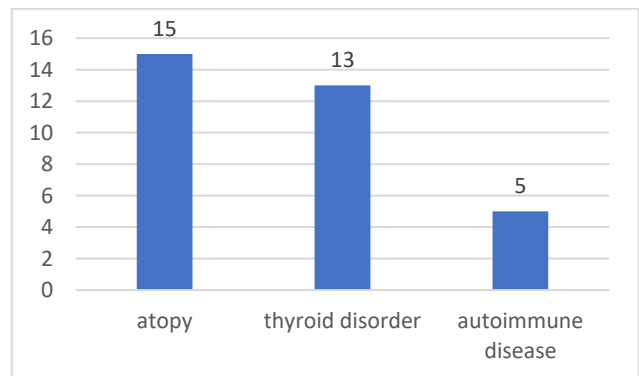


Figure 2: Comorbidities in chronic urticaria patients.

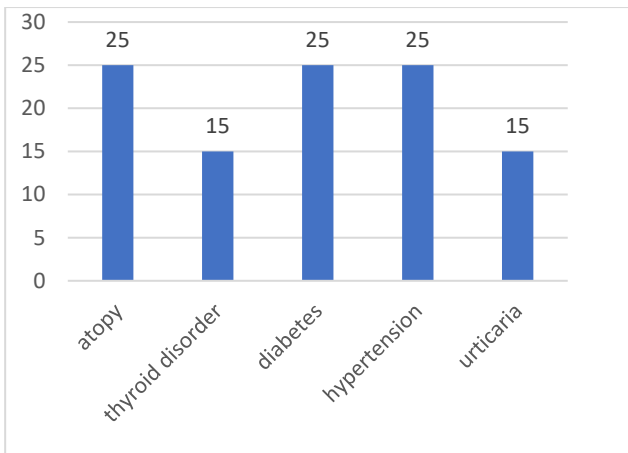


Figure 3: Comorbidities in the family of chronic urticaria patients.

DISCUSSION

Chronic urticaria is a common and frustrating disorder. The life time prevalence of chronic urticaria ranges from 15 to 25%. It is not possible to find out a specific etiology in about 50% of chronic urticaria patients. Possible etiological factors of chronic urticaria include infections, pressure, heat, drugs, dietary pseudo allergens, menstrual cycle, pregnancy, nickel allergy and stress. Chronic urticaria can be associated with autoimmune thyroid disorder. Thyroid function can be normal in chronic urticaria patients with thyroid autoimmunity.⁶ We evaluated the demographic, clinical and etiological profile of 100 patients with chronic urticaria attending the dermatology out patient department of a tertiary care center.

In our study females outnumbered males, with a male to female ratio of 1:3 which coincide with most of the previous studies. Mean age of chronic urticaria patients in our study was 35 years which is also comparable with previous studies.^{7,8} Duration of chronic urticaria in our study ranged from 2 months to 30 years with majority showing a duration of 2 to 3 years. This finding is comparable with study by Heng et al, but contrast with the study by Itakura et al which showed average duration of more than 10 years.^{9,10} Only fifteen patients had urticaria more than 10 years in our study. Majority of the patients had severe urticaria as measured by urticaria activity score which can be attributed to the study setting in the tertiary care center. Wheals were generalized in distribution with sparing of palms and soles. Most of the patients showed diurnal variation of onset of wheals and more than half of them noticed wheals at night which also coincided with previous studies.^{11,12}

More than half of the chronic urticaria patients had angioedema. Angioedema was associated with urticaria, the frequency of which ranges from 16 to 66% in various studies.^{13,14} Dermographism was associated with urticaria in half of the patients which is much higher than previous

studies.^{12,15} Pressure was the most common aggravating factor in our study which is also higher than previous studies.^{8,16} Stress was the exacerbating factor in more than one third of our patients which coincide with study by Kozel et al, but much higher when compared with Ojeda et al.^{15,16} Thirty four patients in our study recollected food as the aggravating factor which is comparable with the study by Juhlin who reported fruits, vegetables and nuts as the common food items exacerbating urticaria.¹¹ Some of the previous studies reported less aggravation of urticaria with food.^{8,16} Drugs were the exacerbating factor in 22% of the patients in our study which is much higher than previous studies.^{8,15,16} Other exacerbating factors observed in our study were sweat, infections, infestations, sunlight, heat, water, cold and exposure to house dust. Family history of urticaria was seen in 15% of our patients which is comparable with the study by Heng et al, but higher than that mentioned in some previous studies.^{9,15,17} Most common comorbidities associated with urticaria was atopic diathesis and thyroid disorder. Atopic diathesis in urticaria patient was less in our study when compared with previous studies, but thyroid disorder was more in our study.^{15,17,18} Most common comorbidities observed in the family of chronic urticaria patients were atopy, hypertension, diabetes and thyroid disorder.

Limitations of our study were small sample size and inability to perform skin prick and challenge tests to confirm the etiological factors of chronic urticaria. Etiological factors were obtained from the history of the patients which could be altered by the awareness, memory and educational status of the patients.

CONCLUSION

Most of the findings in our study coincided with previous studies. But exacerbation of chronic urticaria with pressure, food and drugs, frequency of dermographism, thyroid disorder, atopy and family history of chronic urticaria differed from previous studies. Dermographism was seen in more than half of chronic urticaria patients. Exacerbation of chronic urticaria by food, drugs and pressure was more in our study. Thyroid disorder was more common and atopic diathesis was less common in our patients. Chronic urticaria among family members were also more common in our study.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: The study was approved by the institutional ethics committee

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Cite this article as: Mariyath OKR, Sukumarakurup S, Pinky SRR, Ajina M, Anagha KV. A descriptive study of clinic-epidemiological profile of chronic urticaria from a tertiary care center. *Int J Res Dermatol* 2021;7:184-7.