

Study of clinical profile of patients with chronic spontaneous urticaria at a tertiary care centre

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Abstract

Background: Chronic spontaneous urticaria is characterized by a diverse and heterogeneous presentation. Chronic spontaneous urticaria is a disease affecting 0.5-1% of the population at any given time. Patients are known to suffer from urticaria symptoms for as long as 3-5 years. This study was done to study the clinical profile of patients with chronic spontaneous urticaria at our tertiary care centre. **Material and Methods:** Present study was prospective, observational type conducted in patients having chronic spontaneous urticaria. **Results:** After applying inclusion and exclusion criteria 120 patients were included with most common age group was 31-40 years (45 patients, 37.5%). Mean age of the patients was 34.3 ± 15.4 years. Female patients were 57.5 with male to female ratio of 1:0.74. Most patients had duration of disease as 6 months-1 year (45.83 %), followed by ≥ 1 -year duration (35.83%). Most common symptoms were pruritus (93.33%) and redness of the skin (65%). While on examination most common findings were wheal (56.66%), erythema (45.83%), hives (37.5%). Most commonly involvement of forearms was noted (40 %), followed by Face (23.33%) and all over the body (17.5%). We noted rhinorrhea (25.83%), allergic rhinitis (20.83%), sinusitis (15.83 %), rhinobronchial atopy (12.5%), diabetes mellitus (11.67%) as most common comorbidities associated in patients with chronic spontaneous urticaria. **Conclusion:** Chronic spontaneous urticaria is common in 30-50 years, females, with pruritis and redness of skin, lasting for more than 6 months noted in present study. Early clinical diagnosis and proper treatment can reduce severity of symptoms and improve quality of life.

Key Word: chronic spontaneous urticaria, clinical presentation, risk factors

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INTRODUCTION

Urticaria is characterized by itchy, red, raised (wheal), and flared skin reactions that lasts usually for a few hours (commonly for less than 24 hours). Chronic urticaria is characterized by wheals, angioedema (a localized nonpitting edema of the subcutaneous or interstitial tissue that may be painful and warm.) or both for longer than 6 weeks. It can be further divided into chronic spontaneous urticaria and chronic inducible urticaria. Chronic spontaneous urticaria is defined by the absence of a

specific trigger to skin lesions, whereas chronic inducible urticaria indicates that lesions are activated by a specific stimulus (e.g., symptomatic dermographism, cold urticaria, delayed pressure urticaria, solar urticaria, heat urticaria, vibratory angioedema, cholinergic urticaria, contact urticaria or aquagenic urticarial)¹. Chronic spontaneous urticaria is characterized by a diverse and heterogeneous presentation. Typically, otherwise benign and self-limited, urticaria can be a symptom of life-threatening anaphylaxis or, rarely, indicate significant underlying disease². Chronic spontaneous urticaria is a disease affecting 0.5-1% of the population at any given time. Patients with CU are known to suffer from urticaria symptoms for as long as 3-5 years³. Most chronic spontaneous urticaria patients on the contrary do not benefit by an extensive workup involved in discovering its cause, clinical diagnosis remains mainstay in treatment⁴. Certain situations, where risk factors need to be identified, diagnostic procedures are recommended. This can further help in modifying treatment approach and for framing suitable preventive strategies⁵. Presence of intractable pruritus and long duration in chronic

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urticaria is known to adversely affect the quality of life of the affected^{6,7}. In the majority of patients, it is difficult to identify an underlying cause or inciting factor, thus preventing curative therapy. Non-sedating H1-antihistamines are considered as mainstay of symptomatic therapy, but treatment with licensed doses relieves symptoms effectively in only <50% of patients³. This study was done to study the clinical profile of patients with chronic spontaneous urticaria at our tertiary care centre.

MATERIAL AND METHODS

Present study was prospective, observational type conducted in outpatient department of department of Skin and Venereal Diseases, Dr Ulhas Patil Medical College and hospital, Jalgaon. Total study duration was 1 year. Institutional human ethics committee approval for present study was taken.

Inclusion criteria

Patients having chronic spontaneous urticaria, willing to participate in present study.

Exclusion criteria

1. Patients with physical urticaria, urticarial vasculitis,
2. Children, pregnant women, women willing to be pregnant, lactating women,
3. Urticaria with known etiology like food, drugs, any infections etc.,
4. Patients with systemic corticosteroid or immunosuppressive drug use in the past 6 weeks or other patients with systemic illnesses requiring treatment.

Patients fulfilling the inclusion and inclusion criteria were enrolled with a written informed prior to enrolment in the study. Demographic data and history regarding onset, frequency of disease, infection, gastrointestinal symptoms, aggravating and associated factors were taken. A thorough clinical examination was done and follow up was kept for 6 months. All data was entered in a predesigned proforma. Statistical analysis was done using descriptive statistics.

RESULTS

After applying inclusion and exclusion criteria 120 patients were included in present study. Most common age group was 31-40 years (45 patients, 37.5 %), followed by 21-30 years age group (33 patients, 27.5 %), 41-50 years (31 patients, 25.83 %). Extremes of age groups as less than 20 years (4.16 %) and more than 50 years (5 %) were less common in present study. Mean age of the patients was 34.3 ± 15.4 years Female patients (57.5 %) outnumbered male patients (42.5 %), with male to female ratio of 1:0.74.

Table 1: Age and gender

Characteristic	No. of cases	Percentage
Age group (years)		
0-10	1	0.83
11-20	4	3.33
21-30	33	27.5
31-40	45	37.5
41-50	31	25.83
51-60	3	2.5
61-70	1	0.83
71-80	2	1.67
Gender		
Male	51	42.5
Female	69	57.5

Patients in present study had variable duration of disease. Most patients had duration of disease as 6 months-1 year (45.83 %), followed by ≥ 1 -year duration (35.83 %).

Table 2: Duration of urticaria

Duration of urticaria	No. of cases	Percentage
6 weeks-6 months	22	18.33
6 months-1 year	55	45.83
≥ 1 year	43	35.83

In this study with chronic spontaneous urticaria patients, most common symptoms were pruritus (93.33%) and redness of the skin (65%). While on examination most common findings were wheal (56.66 %), erythema (45.83 %), hives (37.5 %). While less common findings were polymorphic lesions (18.33 %), dermatographism (15.83 %), papules (11.67 %), macules (8.33 %), angioedema (8.33 %), periorbital fascial edema (5 %), swelling of limbs (4.17 %), anaphylactic shock (1.67 %), swelling of the lips (1.67 %), others (4 %).

Table 3: Signs and symptoms

Characteristic	No. of cases	Percentage
Symptoms		
Pruritus	112	93.33
Redness of the skin	78	65
Breathlessness	10	8.33
Vomiting	4	3.33
Others	3	2.5
Signs		
Wheal	68	56.66
Erythema	55	45.83
Hives	45	37.5
Polymorphic lesions	22	18.33
Dermatographism	19	15.83
Papules	14	11.67
Macules	10	8.33
Angioedema	10	8.33
Periorbital fascial edema	6	5
Swelling of limbs	5	4.17
Anaphylactic shock	2	1.67
Swelling of the lips	2	1.67
Others	5	4.17

Most commonly involvement of forearms was noted (40 %), followed by Face (23.33%) and all over the body (17.5 %).

Table 4: Body parts involved

Body parts involved	No. of cases	Percentage
Forearm	48	40
Face	28	23.33
All over the body	21	17.5
Lower limbs	19	15.83
Trunk	5	4.16
Others	4	3.34

We noted rhinorrhea (25.83 %), allergic rhinitis (20.83 %), sinusitis (15.83 %), rhinobronchial atopy (12.5 %), diabetes mellitus (11.67%) as most common comorbidities associated in patients with chronic spontaneous urticaria.

Table 5: Comorbidities

Comorbidities	No. of cases	Percentage
Rhinorrhea	31	25.83
Allergic rhinitis	25	20.83
Sinusitis	19	15.83
Rhinobronchial atopy	15	12.5
Diabetes mellitus	14	11.67
Anxiety	12	10
Contact dermatitis	9	7.5
Asthma	9	7.5
Hypothyroidism	7	5.83
Atopic dermatitis	5	4.17
recurrent URTI	5	4.17
Conjunctivitis	3	2.5
HTN	3	2.5
Fungal infection	2	1.67

DISCUSSION

The duration of chronic spontaneous urticaria is generally 1-5 years, but could be longer in more severe cases associated with features such as angioedema and autoreactivity. Assessment of the severity of the symptoms based on urticaria activity score (UAS)⁸ can be done. Frequent changes were noted in urticaria symptoms intensity, so overall disease activity can measure by advising patients to document 24-hr self-evaluation scores for a week.

Score	Wheal	Pruritus
0	None	None
1	Mild (<20 wheals/24h)	Mild (present but not annoying or troublesome)
2	Moderate (20-50 wheals/24h)	Moderate (troublesome but does not interfere with normal daily activity or sleep)
3	Intense (>50 wheals/ 24 h or large confluent areas of wheals)	Intense (severe pruritus, which is sufficiently troublesome to interfere with normal daily activity or sleep)
Sum of score: 0-6		

In present study most common age group was 31-40 years (37.5 %), followed by 21-30 years age group (27.5 %), 41-50 years (25.83 %). A greater proportion of patients with chronic spontaneous urticaria were seen in the age interval 20 to 65 years^{9,10}. The observations of this study are similar with these studies. More than half patients were female (57.5 %) compared to male (42.5 %) in present study. Similarly, in other studies done among chronic spontaneous urticaria patients, females outnumbered males^{4,11}. While, a study done in Taiwan reported a higher proportion of males in their study¹⁰. van den Elzen MT *et al*¹² reported wheals among 24% and angioedema among 25%, and the remaining 51% suffered both these symptoms. We noted wheal (56.66 %), erythema (45.83 %), hives (37.5 %), polymorphic lesions (18.33 %), dermatographism (15.83 %), papules (11.67 %), macules (8.33 %), angioedema (8.33 %) as common findings. American Academy of Allergy Asthma and Immunology stated that presence of other physical urticarias, dermatographia, and neutrophil cell infiltrate on skin biopsy was associated with chronic spontaneous urticarias which were more difficult to control. In present study involvement of forearms was most common (40 %),

followed by Face (23.33%) and all over the body (17.5 %). Kim J in his study noted distribution of lesions was on the extremities in 35.5%, over the trunk in 35.2%, and over the head in 29.3% urticaria patients¹³. We noted rhinorrhea (25.83 %), allergic rhinitis (20.83 %), sinusitis (15.83 %), rhinobronchial atopy (12.5 %), diabetes mellitus (11.67 %) as most common comorbidities associated in patients with chronic spontaneous urticaria. The most common comorbidities with chronic spontaneous urticaria patients were rhinorrhea, followed by allergic rhinitis and rhinobronchial atopy in present study. Among patients with chronic spontaneous urticaria, allergic rhinitis, rhinorrhea, and anxiety were the most common morbidities reported^{4,11,19}. Various studies also reported common cold, asthma, atopic dermatitis, Obesity, diabetes mellitus, hyperlipidemia, coeliac disease, hypertension, chronic renal failure, gout, anxiety, depression, dissociative and somatoform disorders, gastrointestinal disease, *Helicobacter pylori* infection, and malignancies^{12,14,15,16}. It is also observed that patients with chronic spontaneous urticaria have significantly increased prevalence of comorbidities as reflected by Charlson's comorbidity index¹⁷. History of

present and past cigarette smoking was seen in 11.67 % patients, all were male. Similar results were observed by Shalom G *et al*¹⁸, they also reported that smokers were significantly more prone to develop chronic spontaneous urticaria. While Lapi F *et al.* reported that smoking was associated with a significantly reduced risk of chronic spontaneous urticaria¹⁹ The main choice of treatment in patients with chronic spontaneous urticaria for symptomatic relief is non-sedating antihistaminics, mainly H1 antihistaminics, but they provide relief to symptoms only in less than 50% cases²⁰. For these patients increasing the dose to four folds provides relief but this is also not true in all cases and even with antihistaminics every third or fourth patient will be symptomatic. Such patients are grouped into antihistaminics non responders.²¹ For such patients, additional medications are added like short term corticosteroids in cases of acute flare ups or high doses of 1st or 2nd generation H1 antihistaminics or tricyclic antidepressants such as doxepin etc. Since in chronic urticaria cases there is production of auto antibodies against Ig E or its receptor, therefore the use of immune modulatory agents was also advised by some. They have seen to provide relief in 30% of cases²². Immuno modulatory agents like cyclosporine, methotrexate and intravenous immunoglobulin can be used in refractory cases of chronic urticaria. Methotrexate has been found to effective in idiopathic, autoimmune and steroid dependent types of chronic urticaria²².

CONCLUSION

Chronic spontaneous urticaria is common in 30-50 years, females, with pruritis and redness of skin, lasting for more than 6 months noted in present study. Early clinical diagnosis and proper treatment can reduce severity of symptoms and improve quality of life. Many comorbidities are often associated and needs simultaneous treatment.

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