

Original Research Article

Clinicoepidemiological study of chronic urticaria in a government tertiary care centre in South India

C. Vijayabhaskar¹, S. Venkatesan^{2*}

¹Department of Dermatology, Madras Medical College and Rajiv Gandhi Government General Hospital, Chennai, Tamil Nadu, India

²Department of Dermatology, Government Omanthurar Medical College, Chennai, Tamil Nadu, India

Received: 14 August 2019

Revised: 26 October 2019

Accepted: 02 November 2019

*Correspondence:

Dr. S. Venkatesan,

E-mail: venkatesanss1974@gmail.com

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Background: According to the consensus statement 2017, urticaria is a common skin condition with a lifetime prevalence of 22% and point prevalence of 1%. This study aims to study the clinico epidemiological presentation of chronic urticaria in patients attending a govt. tertiary care center and to assess absolute eosinophil count.

Methods: This observational study was conducted in patients with chronic urticaria presenting to the outpatient clinic of Dermatology department. Patients details including demographics, clinical manifestations, investigations, associated comorbidities, and therapeutic were collected.

Results: Chronic urticaria is commonly present in females-appears commonly in 4th decade but patients present to tertiary care center only in 5th decade-duration was less than 1 year in males, but it was equally between 1-2 and 2-4 years in females. Ear, nose, throat and dental involvement are negligible and common comorbidities are diabetes mellitus, hypertension and hypothyroidism. 42% of patients present with more than normal absolute eosinophil count.

Conclusions: Chronic urticaria was common in females with 5th decade being the common age of presentation to the tertiary care center and 4th decade being the common age of disease onset. Paediatric population is less affected. Common comorbidities like diabetes mellitus, hypertension and hypothyroidism are to be ruled out. Raised absolute eosinophil count has to be looked for.

Keywords: Absolute eosinophil count, Chronic urticaria, Comorbidities, Presentation

INTRODUCTION

Urticaria is a disease that presents with short-lived itchy weal's, angioedema or both. Urticaria persisting for more than six weeks is called chronic urticaria. It may be spontaneous or inducible. Urticaria is itchy and angioedema is painful. The peak incidence of chronic spontaneous urticaria is in the 5th decade. Women dominate men by 2:1.¹ Association between chronic urticaria and other illnesses like autoimmune thyroid disease,^{2,3} coeliac disease, chronic dental infections, candida bowel infections and bowel helminth infections

have been reported but evidence linking viral, bacterial, fungal and parasitic infections with chronic urticaria is lacking. Though there are reports of malignancies in patients with chronic urticaria, no overall association has been found.⁴ Association with alcohol consumption has been reported.⁵ Aggravating factors for chronic urticaria include physical factors, infections, drugs, diets, food additives, spices and alcohol, menses and stress. Acute spontaneous urticaria often presents in childhood.⁶ Lifetime prevalence of acute and chronic urticaria range between 0.6-1.8%.¹ Cholinergic urticaria, urticaria occurring in association with sweating is common in

adolescents.⁷ Study was conducted to find out the age and sex prevalence of age of onset, duration of illness, comorbidities hypertension, diabetes mellitus, hypothyroidism, dyslipidemia, coronary artery disease, retroviral disease, hyper IgE syndrome ,seizure disorder and prevalence of increased absolute eosinophil count.

Aim of the present study was to study the clinico epidemiological presentation of chronic urticaria in patients attending a govt. tertiary care center and to assess absolute eosinophil count.

METHODS

This single-center observational study was conducted in Department of Dermatology at Omanthurar Medical College, Chennai from November 2017 to October 2018 after institutional ethics committee approval.

Inclusion criteria

Inclusion criteria were patients with chronic urticaria presenting to the outpatient clinic of Dermatology department were selected and included in the study after proper consent. Total 162 (males 63, females 99), age more than 3 years and less than 80 years and were willing to consent for this study.

Exclusion criteria

Age less than 3 years and more than 80 years, pregnant and lactating women, patients who suffer from other chronic skin ailments other than urticaria, patients on medications inducing urticarial were excluded in this study.

Patients details including demographics, clinical manifestations, investigations, associated comorbidities, and therapeutic were collected.

Data was presented as frequency and percentages.

RESULTS

Among 162 patients included, females predominated (62%). Among females, most commonly affected were 41-50 yrs. age group (31%), followed by 4th, 6th and 3rd decade. Among males, the same age group dominated followed by 4th, 6th, 2nd and 3rd decade. Only 3 patients were below 10 yrs of age. Duration of illness among females was commonly seen either between 1-2 yrs and 2-4 yrs. (28% and 28%) followed by less than 1 yr. In males, common presentation was within 1 year (33%), followed by 2-4 yrs (24%), 1-2 yrs (21%) and 4-6 yrs (13%). All the patients under 10 yrs (3 in no) presented within 1 yrs duration.

The most common age of disease onset is 4th decade (32%) and 65-70% of patients started developing chronic urticaria between 31-70 yrs. Concurrent involvement of

ear, nose or throat was seen in only one patient (0.6%), the presentation being allergic rhinitis.

Table 1: Age and sex distribution of patients.

Age (years)	Male	%	Female	%
1-10	1	0.6	2	1.2
11-20	8	4.9	2	1.2
21-30	7	4.3	11	6.8
31-40	13	8.0	30	18.5
41-50	18	11.1	31	19.1
51-60	10	6.2	15	9.3
61-70	4	2.5	8	4.9
71-80	2	1.2	0	0.0

Table 2: Duration of illness in years.

Duration (years)	Male	%	Female	%
Less than 1	21	13.0	20	12.3
1-2	13	8.0	28	17.3
2-4	15	9.3	28	17.3
4-6	8	4.9	9	5.6
6-8	0	0.0	3	1.9
8-10	2	1.2	3	1.9
More than 10	4	2.5	8	4.9

Table 3: Age of onset in years.

Age at onset (years)	Male	%	Female	%
1-10	1	0.6	1	0.6
11-20	7	4.3	6	3.7
21-30	7	4.3	18	11.1
31-40	18	11.1	29	17.9
41-50	15	9.3	21	13.0
51-60	6	3.7	9	5.6
61-70	4	2.5	8	4.9
71-80	1	0.6	0	0.0

Only five patients (3.08%) had dental involvement (4.7% males and 2% females), presentations being caries tooth in 3 patients and gingivitis in 2 patients. Comorbidities were observed in 43% of patients (53% females and 27% males), common being diabetes mellitus (19%), hypertension (13%) and hypothyroidism (13%).

Others like dyslipidemia, coronary artery disease, retroviral disease, hyper IgE syndrome and seizure disorder were present in negligible numbers (1-3%), only in females. Malignancy, drug allergy, asthma, immunosuppressive therapy and alcoholic habitus were not reported in this study. Patients did not show improvement with thyroid replacement therapy. In this study 42% of patients presented with more than 400 cells per cumm of absolute eosinophil count (44% in males and 40% in females).

Table 4: Comorbidities.

Comorbidities	Male	%	Female	%
Hypertension	6	3.7	15	9.3
Diabetes mellitus	7	4.3	23	14.2
Hypothyroidism	4	2.5	15	9.3
Dyslipidemia	0	0.0	1	0.6
Coronary artery disease	0	0.0	3	1.9
Retroviral disease	0	0.0	1	0.6
Hyper IgE syndrom	0	0.0	1	0.6
Seizure disorder	0	0.0	2	1.2

Table 5: Absolute eosinophil count.

No. of cells/cumm	Male	%	Female	%
0-100	7	4.3	11	6.8
101-200	7	4.3	19	11.7
201-300	11	6.8	16	9.9
301-400	8	4.9	14	8.6
401-500	9	5.6	17	10.5
501-1000	16	9.9	19	11.7
1001-1500	2	1.2	1	0.6
1501-2000	0	0.0	1	0.6
More than 2000	1	0.6	2	1.2

Normal range: 40-400 cells per cumm

DISCUSSION

Females dominated in the study population similar to other studies.^{1,5,8,9} Though Zuberbier et al, showed the highest prevalence of cholinergic urticaria in 26-28 yrs, only 11% of the study population were in the 3rd decade.⁷ Number of patients under 10yrs of age was 1.8% only similar to Balp et al, with prevalence being 1.38% among paediatric population.⁶ Unlike Katsarou et al, showing 50% of patients with less 30 yrs of age at disease onset, only 27% were with this age of onset and 32% presented with disease onset in the 4th decade.⁸ Ear, nose or throat involvement was very negligible (0.6%), unlike Zuberbier et al, showing 39.1% of patients with comorbidities like allergic rhinitis or oral allergy syndrome and Kim et al, saying allergic rhinitis as one of the most common comorbidities in chronic urticaria.^{1,11} Hypothyroidism was the 3rd most common comorbidity in this study. Though it is said that 30-50% of patients with chronic idiopathic urticaria have an autoimmune basis, study presented that only 12% of patients had clinical hypothyroidism.⁹ Unlike Sugiyama et al, patients did not show improvement with thyroid replacement therapy.³ No malignancy was detected in this study was said by Lindelf et al.⁴ Variables like obesity, anxiety, dissociative and somatoform disorders, malignancy, use of immunosuppressive drugs and chronic use of systemic corticosteroids, said to increase the risk of chronic spontaneous urticaria were not found.^{9,10} Unlike Zhong et al, alcohol consumption was not reported, but similar to the same study, this study did not show latent infections and chronic inflammatory diseases.⁵

CONCLUSION

Chronic urticaria was common in females with the common age of onset being 4th decade and the common age of presentation being 5th decade. Prevalence of paediatric age involvement was very less. Diabetes mellitus, hypertension and hypothyroidism were the common comorbidities. Alcohol consumption and cancer were not reported. Patients with clinical hypothyroidism did not improve with thyroid replacement therapy. A considerable number of patients had raised an absolute eosinophil count.

Funding: No funding sources

Conflict of interest: None declared

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

REFERENCES

- Zuberbier T, Balke M, Worm M, Edenharter G, Maurer M. Epidemiology of urticaria: a representative cross-sectional population survey. *Clini Experiment Dermatol.* 2010;35(8):869-73.
- Fairbairn S. Current opinion in allergy and clinical immunology. *Curr Opinion Aller Clini Immunol.* 2018;18(3):167.
- Sugiyama A, Nishie H, Takeuchi S, Yoshinari M, Furue M. Hashimoto's disease is a frequent comorbidity and an exacerbating factor of chronic spontaneous urticaria. *Allergol Immunopathol.* 2015;43(3):249-53.
- Lindelöf B, Sigurgeirsson B, Wahlgren CF, Eklund G. Chronic urticaria and cancer: an epidemiological study of 1155 patients. *Brit J Dermatol.* 1990;123(4):453-6.
- Zhong H, Song Z, Chen W, Li H, He L, Gao T, et al. Chronic urticaria in Chinese population: a hospital-based multicenter epidemiological study. *Allergy.* 2014;69(3):359-64.
- Balp MM, Weller K, Carboni V, Chirilov A, Papavassilis C, Severin T, et al. Prevalence and clinical characteristics of chronic spontaneous urticaria in pediatric patients. *Pediatr Allergy Immunol.* 2018;29(6):630-6.
- Zuberbier T, Althaus C, Chantraine-Hess S, Czarnetzki BM. Prevalence of cholinergic urticaria in young adults. *J Am Acad Dermatol.* 1994;31(6):978-81.
- Katsarou-Katsari A, Makris M, Lagogianni E, Gregoriou S, Theoharides T, Kalogeromitros D. Clinical features and natural history of acquired cold urticaria in a tertiary referral hospital: a 10-year prospective study. *J Europ Acad Dermatol Venereol.* 2008;22(12):1405-11.
- Lapi F, Cassano N, Pegoraro V, Cataldo N, Heiman F, Cricelli I, et al. Epidemiology of chronic spontaneous urticaria: results from a nationwide, population-based study in Italy. *Brit J Dermatol.* 2016;174(5):996-1004.

10. Kim BR, Yang S, Choi JW, Choi CW, Youn SW. Epidemiology and comorbidities of patients with chronic urticaria in Korea: A nationwide population-based study. *J Dermatol.* 2018;45(1):10-6.

Cite this article as: Vijayabhaskar C, Venkatesan S. Clinicoepidemiological study of chronic urticaria in a government tertiary care centre in South India. *Int J Res Dermatol* 2020;6:100-3.