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A Cross Sectional Study to Evaluate Occurrence of Anxiety and Depression in Patients with Chronic Spontaneous Urticaria

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ABSTRACT:

Chronic spontaneous urticaria is a chronic skin disease with significant impairment of quality of life. A significant association with psychiatric co-morbidities has been shown in recent studies. To evaluate this association, we conducted a cross-sectional study where the first phase include assessment for psychiatric co-morbidities with 12-item general health questionnaire (GHQ-12). In the second phase, patients with GHQ-12 ≥3 were assessed for various psychiatric illnesses using Hamilton anxiety rating scale, Beck depression inventory, and Yale-Brown obsessive compulsive scale. Clinical diagnosis was made using ICD-10 criteria and quality of life was measured using WHO-QOL brief scale. A total of 108 patients were recruited, 22 (18.5%) of them had GHQ-12 ≥3 and were included in second phase. On phase 2 screening, 8 (7.4%) patients had anxiety and 12 (11.1%) patients had depression. Significant impairment of quality of life affecting all 4 domains was seen in all the patients. Our study shows a high incidence of psychiatric co-morbidities (18.5%) especially anxiety and depression in patients with chronic spontaneous urticaria.

Key words: Chronic spontaneous urticaria, chronic skin disease, psychiatric co-morbidities, anxiety, depression

INTRODUCTION:

Chronic spontaneous urticaria is an itchy skin disease characterized by occurrence of wheals with or without angioedema for more than 6 weeks. Usually, no etiology is found and cause of the disease remains uncertain. The disease has a chronic and a remitting relapsing disease course and patient usually require various antihistamines and immunosuppressive therapy for a long period of time. It affects 0.5–1% of the general population and 0.1–0.3% of children and globally it contributes to 4.7 million age-standardized disability-adjusted life years and 4.7 years lived with disability. The disease is associated with a high psychosocial burden and has shown to be associated with psychiatric morbidities as depression and anxiety. Indian studies evaluating this association are limited in number. Therefore, we planned to conduct a cross-sectional study and evaluate the occurrence of psychiatric co-morbidities in patients presenting with chronic spontaneous urticaria.

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METHODOLOGY:

This study was conducted in tertiary medical college and hospital in department of Psychiatry in collaboration with the department of Dermatology. This was a cross-sectional study, conducted over a period of 10 months. All consecutive patients (age above 16 years) with a clinical diagnosis of chronic spontaneous urticaria attending the outpatient department of Dermatology were recruited. Patients with significant systemic illnesses were excluded from this study.

After written informed consent, the first phase of screening for psychiatric co-morbidities of all the patients was done using the 12-item general health questionnaire (GHQ-12). The GHQ -12 is a patient-based questionnaire and is used to screen patients with psychiatric disorders followed by a formal psychiatric interview to determine a diagnosis. Each question was scored 0-3 based on Linkert's scale and a total score of 3 or more was considered significant.

In the second phase, patients who scored 3 or more on GHQ-12 were further evaluated for specific psychiatric illnesses using appropriate scales. The brief Psychiatric Rating Scale (BPRS) was developed using factor analysis to assess changes in the severity of psychotic features. It contains 18 items, each representing a separate symptom zone. Among these 18 items, 5 require observation of the patient, and 13 require the patient's verbal response. Further rating of these 18 items is based on 7 points Likert scale, having a total score range of 18-126, and a score of 30 and above is considered significant.

The Hamilton Anxiety Rating Scale (HARS) was developed to assess changes in the severity of anxiety symptoms. It contains 14 items, each representing a series of symptoms, and measures both somatic and psychic anxiety. Further rating of these 14 items are rated on a 5-point scale having a total score range of 0-56 and a score of >=14 suggests clinically significant anxiety.

The Beck Depression Inventory (BDI) is used to assess the severity of depression in clinically diagnosed patients as well as a screening tool to detect depressive symptoms in the normal population. It contains 21 items with a rating of 0-3 according to the severity of symptoms creating a score range of 0-63 with a division as minimal 0-13, mild 14-19, moderate 20-28, and severe 20-63.

Yale-Brown Obsessive Compulsive Scale (Y-BOCS) is used to measure the severity and type of symptoms in patients with diagnosis of obsessive compulsive disorder. It is divided into two sub scales: obsession and compulsion. Each subscale is then rated from 0 to 4 on the basis of 5 aspects of pathology which is time, functioning, distress, resistance, and control. Total score range from 0-40 and a 16 or more is considered significant.

The quality of life was also evaluated using the WHO Quality of life brief scale (WHOQOL-BRIEF).

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RESULTS:

A total of 108 patients were recruited. After phase 1 screening, 22 (18.5%) of them were found to have a GHQ-12 score of ≥3 and were subjected to phase 2 screening. Among these 22 patients, there were 15 (68%) male and 7 (32%) female, and the mean age of the presentation was 32.22 years (range:25-44). Majority had moderate degree of severity for their skin disease. Nineteen (86.3%) of these patients were educated till high school. Their occupation varied from unemployed (2, 9%), self-employed (12, 54.5%), housewives (6, 27.2%), and government job (2, 9%). All (100%) of them were married. The majority of the patients were from urban areas (20, 90.9%) and most of them (18, 81.8%) had their family income in the range of 10,000-25,000 rupees. Twenty (90.9%) of them were residing in nuclear families while two (9%) were in joint families.

As per the ICD-10 criteria, among the psychiatric co-morbidities in 108 patients, 8 (7.4%) patients had anxiety and 12 (11.1%) patients had depression. Two patients were classified as unspecified.

BPRS score in all 22 patients with GHQ-12 ≥ 3 was <30 ruling out any psychotic co-morbidities in these patients. In these 22 patients, a HARS score ≥ 14 was noted in 20,90.9% patients (Table 1). A BDI score of >13 was seen in 12 (54.5%) of these 22 patients. Y-BOC score of >16 was not seen in any of them. The mean of patients with WHO QOL domain 1 (physical health) was 76.07, domain 2 (psychological) at 55.98, domain 3 (social) at 72.66, and domain 4 (environmental) at 82.55.

DISCUSSION:

Psychosocial factors are likely to contribute in the pathogenesis of chronic spontaneous urticaria as seen in a systematic review which evaluated 114 studies and found that psychosocial factors had a prevalence of 46.09% in this population. Urticaria patients had more life events, insomnia, less family support and negative coping mechanisms as seen in a case-control study by Yang *et al*. Various neuroendocrine factors have been evaluated to describe this association. Relaxation and hypnosis techniques have shown to improve the symptoms in chronic spontaneous urticaria patients resulting in reduced requirement of antihistamines.

Chronic spontaneous urticaria has shown a significant association with various psychiatric comorbidities as shown in a meta-analysis where these patients were shown to six time more likely to suffer from depression and anxiety compared to general population. In a national wide study using Clalit Health Services database including 12,539 patients of chronic spontaneous urticaria and 60,510 controls, a higher frequency of anxiety (9.6% vs. 5.7%, $p < 0.001$) and depression (11% vs 7.9%, $p < 0.001$, respectively) was found in urticaria patients compared to that in controls. Similarly, in another study by Tat including 50 patients of urticaria and 60 healthy control, showed symptoms of depression and anxiety in 48% of

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patients each. A relative lower frequency of anxiety (7.4%) and depression (11.1%) was seen in our cohort. An improvement has been noted in psychiatric symptoms along with the disease severity using omalizumab.

Severe pruritus and sleep disturbances are the main attributing factors for these psychiatric morbidities in these patients. In a study by Huang *et al*, 393 patients of chronic spontaneous urticaria were included and itching and sleep quality mediated 65.4 and 77.6% of urticaria's effects on anxiety and depression, respectively. We could not evaluate sleep quality and itch severity in our patients.

CONCLUSION:

Thus, our study suggests a significant association of psychiatric co-morbidities in patient with chronic spontaneous urticaria. Prospective long-term studies are required to explore and underlying mechanism which may also help in its therapeutics.

Table 1: Score of various scales in patients with chronic spontaneous urticaria recruited for phase 2 screening

SN	GHQ-12 score	BPRS score	HARS score	BDI score	Y-BOC score	WHO-QOL domain 1	WHO-QOL domain 2	WHO-QOL domain 3	WHO-QOL domain 4
1	28	18	16	34	0	50.72	33.33	58.33	78.12
2	28	18	16	34	0	92.65	75	58.33	84.37
3	21	19	17	30	0	82.12	52.5	75	75.12
4	21	20	42	3	0	82.12	75	75	78.12
5	21	19	16	20	0	82.12	75.00	75.00	78.12
6	21	19	17	30	0	92.55	75	91.66	90.62
7	21	20	42	3	0	60.72	25	55.33	78.12
8	21	19	16	20	0	78.57	66.66	83.33	84.37
9	20	19	32	38	0	60.72	33.33	58.33	78.12
10	20	19	32	38	0	60.72	25	58.33	78.12
11	19	22	42	2	0	60.72	25.00	58.33	78.12
12	19	22	42	2	0	90.72	25	68.33	75.12
13	18	19	46	2	0	82.12	62.5	83.33	87.5
14	18	19	20	32	0	60.72	33.33	58.33	78.12
15	18	19	48	2	0	82.12	75	75	78.12
16	17	21	48	3	0	57.12	75.12	100	87.5
17	17	21	48	3	0	60.72	33.33	58.33	78.12

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SN	GHQ-12 score	BPRS score	HARS score	BDI score	Y-BOC score	WHO-QOL domain 1	WHO-QOL domain 2	WHO-QOL domain 3	WHO-QOL domain 4
18	16	19	20	32	0	50.72	33.33	58.33	78.12
19	9	19	18	26	0	92.85	58.33	58.33	81.25
20	9	19	18	26	0	92.85	75	91.65	90.02
21	3	16	6	0	0	100	100	100	100
22	3	15	6	0	0	100	100	100	100

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