The Etiological Evaluation of Patients with Chronic Urticaria

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Abstract

Objectives: Chronic urticaria (CU) is a common skin disease characterised by skin lesions and angioedema lasting longer than six weeks. Although many factors, such as autoimmune diseases, infections, drugs and malignancies, are blamed in the etiology, no reason can be found in a significant majority of the patients. The present study aims to investigate the factors which have a role in the etiology in patients diagnosed with CU.

Methods: Sixty-two patients who were followed-up with the diagnosis of CU in the Allergy Polyclinic of Dermatology Clinic were retrospectively evaluated in this study. The clinical and laboratory data of the patients were obtained from the patient files and the hospital automation system. The obtained data were given as a number and percentage for the categorical variables and as mean, standard deviation, minimum, and maximum for the numerical variables.

Results: The patient group consisted of 33 women (53.2%), and 29 men (46.8%), with 62 patients. The prevalence of angioedema was calculated as 51.6%, and the accompanying physical hives was calculated as 40.3%. Autoimmune disease was accompanying in 14 (22.6%) patients, and coexisting infection was detected in 15 (24.2%) patients. Thyroid autoantibodies were detected positive in 24.5% of the patients, and helicobacter pylori (H.pylori) antigen was found positive in 69% of the patients.

Conclusion: Autoimmune thyroid diseases and infections are frequently detected as the accompanying diseases in patients diagnosed with CU.

Keywords: Etiology; chronic; urticaria.

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cal data for the patients were obtained from patient files, while laboratory data were obtained from patient files and the automation system. SPSS 15.0 for Windows was used for statistical analysis. For descriptive statistics, numbers and percentages were given for categorical variables, and mean, standard deviation, minimum, and maximum were given for numerical variables.

Results

The study group consisted of 62 patients, 33 (53.2%) female and 29 (46.8%) male. The average age of the patients was calculated as 41.0±13.2, while the average duration of illness was calculated as 44.6±55.1 months. Angioedema was present in 51.6% of the patients and physical urticaria in 40.3%. The demographic and clinical characteristics of the patients are summarized in Table 1.

At least one autoimmune disease was seen in 14 (22.6%) patients (autoimmune thyroid disease in 12 patients, vitiligo in two patients, Sjogren syndrome in one patient), and a concomitant infection was seen in 15 (24.2%) patients. Erythrocyte sedimentation rate (ESR) and C-reactive protein (CRP) were high in 40.4% and 24.1% of the patients, respectively. At least one thyroid autoantibody (thyroid peroxidase 24.5%, anti-thyroglobulin 24.5%) was found in 28.5% of the patients and 69 of them tested positive for helicobacter pylori antigen. The total IgE average was calculated as 243.5±330.1. Laboratory findings for the patients are summarized in Table 2.

Discussion

Urticaria is a commonly occurring skin disease. It has been reported that 15-25% of the population experiences one urticaria attack, and 0.1-1% develop chronic urticaria. Chronic urticaria is most common in women and young adults between 20 and 40 years of age. The average age of the patients in this study was calculated as 41.0±13.2 and the ratio of women as 53.2% and the patients' demographic data were in keeping with the literature. It has been reported that angioedema is seen in 50% of patients and physical urticaria in one-third of patients (4). In this study, angioedema was seen in 51.6% of the patients and physical urticaria in 40.3%, which is consistent with the literature.

Studies of the etiology of chronic urticaria have revealed evidence of various types pointing to autoimmune diseases, infections, drugs, and foods. However, etiological factors cannot be detected in a significant number of patients, and, in this regard, the Turkish guidelines for the diagnosis and treatment of urticaria stress the need for routine hemograms, CRP, and ESR in patients with chronic urticaria, and for other detailed tests to be chosen depending on the patient's history. Hemogram, CRP, and ESR were routinely asked from the patients in our group, too, and H. pylori antigen, thyroid function tests and autoantibodies, urinalysis were requested for patients with indications depending on patient anamnesis and examination findings.

The role of autoimmunity has come to the fore in studies on pathogenesis in recent years. In 45-55% of patients, there are IgG antibodies formed to counter the FcεRIα of the high-affinity IgE receptor and IgE. The association of urticaria with autoimmune and atopic diseases has been demonstrated in cohort studies involving large patient groups. It has been reported that the frequency of thyroid diseases, type 1 diabetes mellitus, systemic lupus erythe-

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Table 1. Demographic and clinical features of patient group

| Demographic and clinical features | n (%) |
|----------------------------------|-------|
| Gender, n (%)                    |       |
| Female                           | 33 (53.2) |
| Male                             | 29 (46.8) |
| Age (year) mean±SD (min-max)     | 41.0±13.2 (18-74) |
| Age at disease onset (year) mean±SD (min-max) | 37.4±13.0 (7-74) |
| Disease duration (month) mean±SD (min-max) | 44.6±55.1 (1-180) |
| Angioedema                       | 32 (51.6) |
| Physical urticaria               | 25 (40.3) |
| Accompanying autoimmune disease  | 14 (22.6) |
| Autoimmune thyroid disease       | 12 (19.3) |
| Vitiligo                         | 2 (3.2) |
| Sjogren's syndrome               | 1 (1.6) |
| Accompanying infection           | 15 (24.2) |
| Urinary system infection         | 6 (9.6) |
| Upper tract infection            | 5 (8) |
| Other                            | 4 (6.2) |
| UAS7 mean±SD (min-max)           | 12.6±10.7 (0-40) |

UAS7: Urticaria activity score; SD: Standart deviation.

Table 2. Laboratory findings of patient group

| Laboratory findings | Mean±SD (min-max) |
|---------------------|-------------------|
| WBC µl/ml           | 8.1±2.9 (3.9-20.8) |
| EO µl/ml            | 0.20±0.15 (0.02-0.70) |
| EO%                 | 2.47±1.88 (0.1-9.1) |
| CRP (>5 mg/L)       | 23 (40.4) |
| ESR (>20 mm/h)      | 13 (24.1) |
| TSH mIU/L           | 21.2±145.8 (0.3-1112) |
| FT4 ng/dL           | 1.43±1.94 (0.62-10.4) |
| Positive antityroidperoxidase | 12/9 (42.5) |
| Positive antityroglobulin | 12/9 (42.5) |
| IgE mean±SD (min-max) | 243.5±330.1 (7.8-1883) |
| (>89 µg/L)          | 34 (61.8) |
| Positive H.pylori antigen | 9/13(69) |
The small number of patients and the missing data in the patient files and automation system constitute the most important limiting factors in this study.

In this study, autoimmune thyroid disease and infections were higher in patients with CU in parallel with other studies in the literature. However, no etiological factors were found in half of the patients.

Disclosures

Ethics Committee Approval: The study was approved by the Şişli Hamidiye Etfal Training and Research Hospital local ethics committee.

Peer-review: Externally peer-reviewed.

Conflict of Interest: None declared.

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