

DOI: 10.31393/reports-vnmedical-2023-27(4)-12

UDC: 616.514-037:572.087+612-071

## PECULIARITIES OF CLINICAL, ANAMNESTIC AND DERMATOLOGICAL INDICATORS IN UKRAINIAN MEN AND WOMEN WITH URTICARIA

Aladwan A. M. A., Dmytrenko S. V., Belik N. V., Koliadenko S. V., Loboda I. V.

National Pirogov Memorial Medical University, Vinnytsya (Pyrogov street 56, Vinnytsya, Ukraine, 21018)

Responsible for correspondence:  
e-mail: amjad\_aladwan@yahoo.com

Received: August, 02, 2023; Accepted: September, 07, 2023

**Annotation.** The basis of optimal prevention of urticaria in most cases is to establish the exact causes of this disease, which is far from an easy task. In fact, the elimination of the suspected stimulating stimulus allows to achieve remission, in which the patient's condition normalizes for a fairly long period of time and the patient's quality of life improves significantly. The purpose of the work is to establish the peculiarities of clinical, anamnestic and dermatological indicators in patients with acute and chronic urticaria of a mild and severe course in young Ukrainian men and women. A clinical, anamnestic and dermatological examination of 40 Ukrainian men and 40 young Ukrainian women with acute and chronic urticaria of mild and severe course was carried out. Urticaria was diagnosed according to the EAACI/GA<sup>2</sup>LEN/EuroGuiDerm/APAAACI international guidelines. All patients underwent a questionnaire to determine the nature of work and various negative factors affecting the skin, as well as to determine the dermatological status. To assess the degree of negative impact of urticaria on various aspects of the patient's life, a dermatological quality of life index was determined. Statistical processing of the research results was carried out with the help of the license package "Statistica 6.0" using non-parametric methods of evaluating the obtained results. As a result of the conducted research, it was established that regardless of the form of urticaria in men with a severe course of the disease, the frequency of representatives with the physical nature of work, the presence of an allergic reaction, the presence of a stress factor in the anamnesis, the presence of pain in the affected area of the skin, on the mucous membrane, on the limbs is increasing, the presence of angioedema of the skin and higher values of the dermatological index; and in women with a severe course of the disease - the presence of an allergic reaction, the factor of taking drugs, the presence of pain in the area of skin damage, on the scalp and mucous membrane, angioedema of the skin and higher values of the dermatological index. In men with a mild course of the disease, the frequency of representatives with the mental nature of work and the presence of the moisture factor increases; and in women with a mild course of the disease - the insolation factor. Among patients with the acute form of urticaria, men with a mental nature of work and women with the presence of the humidity factor, a burning sensation in the affected area of the skin and on the limbs predominate; and among patients with a chronic form of urticaria - men with an allergic reaction, with the presence of a seasonality factor, with localization of skin lesions on the scalp and skin on the face, and women with a mixed nature of work, a seasonality factor, insolation.

**Keywords:** skin diseases, acute and chronic urticaria, clinical and anamnestic indicators, dermatological indicators, Ukrainian men and women.

### Introduction

Urticaria belongs to a heterogeneous group of diseases, which is characterized by the development of an urticarial rash on the skin followed by an angioedema-like process. Acute urticaria is accompanied by the formation of these symptoms in a period of less than six weeks. The induced type of urticaria can have a chronic course. Different forms of dermatosis have certain features in their manifestation. So, for example, delayed urticaria caused by mechanical pressure is characterized by swelling at the point of physical impact and develops several hours after the action of the provoking factor. Sometimes patients with chronic urticaria develop isolated swellings without blisters [1, 21].

According to statistics, about a quarter of the world's population suffers from the symptoms of this dermatosis. Children and infants under the age of five are more likely to get hives, probably because their immune system is less able to fight off the provoking factors-intervenors. At the same time, only 2-7 % are children, the rest is the adult age group [22].

The age of onset of the disease is more than 40 years.

Moreover, women are more likely to suffer from urticaria. It is most likely related to hormonal allergies and an autoimmune reaction to estrogen [28].

The danger of the pathology is that Quincke's edema may occur. At the same time, allergic swelling of the deep layers of the skin occurs, with a feeling of itching, burning or just discomfort. When this swelling is localized in the larynx, the lumen of the respiratory tract is sharply reduced or may completely overlap with a dangerous consequence [12].

Induced urticaria is the term for cases in which triggers have been identified, while spontaneous cases have no known cause. Urticaria and edema can be caused by allergies to smells and food, infectious factors, bad habits, disruption of hormonal metabolism, drugs and household chemicals, nutritional imbalance, water, heat or cold, physical and mental overstrain, sunstroke, adverse ecology, labor conditions [5].

In isolated cases, the hereditary nature of urticaria has been established. The presence of dermatosis in the family history increases the likelihood of its development. Although

not the only factor, genetics play a role in the severity of the condition. Researchers have identified specific genes associated with both acute and chronic cases [25].

Constant contact with provoking factors contributes to the transition of dermatosis into a chronic form. Researchers found a higher frequency of urticaria among people living in densely populated urban areas. This is due to the fact that such a population has an increased chance of exposure to triggers [18, 21].

The relevance of the problem under investigation is substantiated by a steady trend towards an increase in the frequency of urticaria over the last ten years in Ukraine. This is primarily explained by the unfavorable low quality of drinking water and food, environmental factors, uncontrolled use of medicines, and exposure to toxic household chemicals. The high frequency and complexity of differential diagnosis of various forms of urticaria are the main reasons for significant difficulties in the selection of therapy. Urticaria prevention strategies should be planned effectively to reduce the frequency of urticaria and the severity of symptoms. This should include medical evaluations and tests, adapting habits to the patient's lifestyle, identifying, tracking and eliminating triggers, and taking care of physical and mental health [13].

*The purpose of the work* is to establish the peculiarities of clinical, anamnestic and dermatological indicators in patients with acute and chronic urticaria of a mild and severe course in young Ukrainian men and women.

## Materials and methods

On the basis of the Military Medical Clinical Center of the Central Region and the Department of Skin and Venereal Diseases with a postgraduate course at the National Pirogov Memorial Medical University, Vinnytsya, a clinical anamnestic and dermatological examination of 40 Ukrainian men and 40 Ukrainian women of young age (25-44 years according to WHO 2015 age periodization) patients with acute and chronic urticaria of mild and severe course. Committee on Bioethics of National Pirogov Memorial Medical University, Vinnytsya (№ 11 From 23.12.2021) found that the studies do not contradict the basic bioethical standards of the Declaration of Helsinki, the Council of Europe Convention on Human Rights and Biomedicine (1977), the relevant WHO regulations and laws of Ukraine.

B the diagnosis of urticaria was made in accordance with the EAACI/GA<sup>2</sup>LEN/EuroGuiDerm/APAAACI international guidelines for the definition, classification, diagnosis and treatment of urticaria (<https://pubmed.ncbi.nlm.nih.gov/34536239/>). According to international guidelines, acute urticaria was diagnosed in patients with disease duration ≤6 weeks, and chronic urticaria was diagnosed in patients with disease duration ≥6 weeks. The severity of urticaria was assessed by the sum of points (0-2 - mild degree; 3-4 - medium degree; 5-6 - severe degree), taking into account objective criteria - the number of urticarial elements that appeared on the

skin during 7 days and subjective criteria - intensity of itching.

All patients underwent a questionnaire in order to determine the nature of work, various negative factors affecting the skin, bad habits and burdened heredity, as well as determining the dermatological status of patients (complaints of itching, burning and pain; localization of skin lesions; presence of urticaria spots, angioedema, red persistent dermographism).

To assess the degree of negative impact of urticaria on various aspects of the patient's life, which characterize the quality of his life in general, the Dermatology Life Quality Index (DLQI) was determined [7]. The obtained results were evaluated according to the scale of interpretation: from 0 to 1 point - the skin disease does not affect the patient's life; from 2 to 5 points - slightly affected; from 6 to 10 points - moderately affected; from 11 to 20 points - very strong influence; from 21 to 30 points - extremely strong influence.

Statistical processing of the results of clinical and anamnestic and dermatological indicators was carried out with the help of the "Statistica 6.0" license package. The reliability of the difference in values between independent quantitative indicators was determined using the Mann-Whitney U-test, and between independent percentage values - according to the Weber E. formula:

$$t = \frac{R_1 - R_2}{\sqrt{\frac{N_1 R_1 + N_2 R_2}{N_1 + N_2} \cdot \frac{100 - \frac{N_1 R_1 + N_2 R_2}{N_1 + N_2}}{N_1 + N_2}}}$$

where,  $P_1$  and  $P_2$  - percentages of occurrence of the corresponding feature;

$N_1$  and  $N_2$  - the number of observations in the studied groups.

## Results. Discussion

The main task of modern dermatology is timely diagnosis and elimination of the etiological factor. It should be noted that the etiology of this dermatological disease is very diverse and according to the works of various researchers, the priority of participation of certain factors in the development of urticaria is quite controversial [2, 5, 9].

When analyzing literary sources, not a single work was found that described the dependence of the frequency of occurrence of urticaria of various forms and the severity of the course depending on the nature of work. In our study, it was established that among *men with a physical nature of work*, there is a tendency ( $p=0.067$ ) to a higher percentage of patients with acute urticaria of a severe course (50 %) compared to patients with a similar form of dermatosis of a mild course (10 %). Among *men of mental nature of work*, a slight tendency ( $p=0.077$  in both cases) was established for a higher percentage of patients with acute urticaria of a mild course (30 %) compared to patients with an acute form of dermatosis of a severe course and a chronic form of dermatosis of a mild course (0 % in both cases). Among *women with a mixed nature of work*, a significantly ( $p<0.05$ ) higher percentage of patients with chronic urticaria of a mild course (70 %) compared to the

acute form of dermatosis of similar severity (20 %) was established.

A personal history of allergies or previous outbreaks of urticaria increase the overall risk of dermatosis. In addition, allergy and urticaria share common pathogenetic mechanisms. In certain autoimmune disorders, the immune system mistakenly attacks healthy body cells, which can become provoking risk factors for dermatosis; this is especially true for thyroid diseases and rheumatoid arthritis [1, 21]. Urticaria caused by immunoglobulin E and non-immunoglobulin E-mediated release of histamine and other inflammatory mediators by mast cells and basophils usually presents with severe itching, sometimes with subcutaneous or interstitial edema. Although it is often a self-limited and benign process, the disease can cause significant discomfort and last from months to years. A number of scientists [1, 2, 21] found a predominance of cases of severe course and chronicity of dermatosis provoked by an allergic reaction.

*Among male patients*, in whom the development of symptoms of urticaria was probably associated with the presence of an *allergic reaction*, we established a significantly ( $p < 0.05$ ) higher percentage of patients with chronic urticaria of a severe course (50%) compared to patients with the acute form severe dermatosis (0 %) and a tendency ( $p = 0.067$ ) to a greater value - compared to patients with a chronic form of mild dermatosis (10 %). *Among women* with an *allergic reaction*, a slight tendency ( $p = 0.077$ ) was established for a higher percentage of patients with acute urticaria of a severe course (30 %) compared to a similar form of dermatosis of a mild course (0 %).

Sensitization to allergens occurs quietly and without the knowledge of the patient, while the effector phase is associated with certain symptoms such as rhinoconjunctivitis, asthma, urticaria, gastrointestinal symptoms or even anaphylactic shock. As an exception, only in patients under the age of 15, allergies are more often diagnosed in men. At a later stage of life, women are clearly more likely to suffer from respiratory allergies and urticaria. In addition, there was a 60:40 ratio of female to male patients with severe allergies. Also, more than 60 % of cases of predominance of anaphylaxis have been documented in female patients [11]. We found a slight tendency ( $p = 0.077$ ) to a higher percentage of people (30 %) with an *allergic reaction*, compared to men of the same comparison group (0 %), only among women with severe acute urticaria.

Living with high levels of stress can cause a physical reaction in the skin that causes hives, called a stress rash. According to many clinical observations [14], it is suggested that psychological stress can be both a triggering factor in the occurrence of chronic urticaria and a modulating factor in the severity of the course of the disease and the effectiveness of therapy. For example, during the COVID-19 pandemic and mass isolation, excessive fear, stress and anxiety have been reported among people. Patients who suffered from the chronic form of this dermatosis

experienced insufficient control of the disease. S. Tawil et al. [24] report a positive correlation between the severity of the disease and the presence of a stress factor. S. Beyaz et al. [4] found that the urticaria activity score 7 (UAS7) and the number of patients with more severe dermatosis during the pandemic were higher compared to the pre-pandemic period. Similarly, we have established a tendency ( $p = 0.067$ ) to a higher percentage of the *presence of a stress factor in the anamnesis among men* suffering from severe chronic urticaria (90 %) compared to representatives of the mild course of a similar form of dermatosis (50 %).

Physical factors such as cold and heat can cause hives. Cold urticaria is usually idiopathic, but can occur in patients with cold-dependent antibodies such as cryoglobulins or cold agglutinins. Patients develop itching, erythema and urticaria on the part of the body that was exposed to the cold. Local urticaria caused by heat is rare [6, 8]. Some patients may develop urticaria both under the influence of heat and cold [26]. According to the data of J. H. Seo et al. [22] the prevalence of cold and heat urticaria over 5 years was 0.019 %, and in female patients it was 1.2 times higher than in male patients (55 % vs. 45 %). P. E. C. K. Gabrielle et al. [9] also found that in adults, all types of urticaria are more common in women than in men, with the exception of cholinergic urticaria, which is more pronounced in both adult men and children. S. Wertenteil, A. Strunk and A. Garg [28] established that women over 20 years of age suffer from urticaria caused by exposure to heat and cold at least twice as often as men of the same age. Actually, the results of our research differ from the data of foreign colleagues. Among men with acute urticaria of a mild course with the *presence of a temperature factor*, a tendency ( $p = 0.067$ ) was established for a higher percentage of individuals (90 %) compared to women of the same comparison group (50 %). This may be related to social and everyday aspects, such as the specifics of work, living conditions, physical activity, etc.

Most forms of urticaria are chronic, persistent and often last from several years to decades. Up to 40 % of patients suffering from chronic urticaria for more than 6 months, according to Y. Rosman et al. [20], will have seasonal urticaria after 10 years. It is impossible to speak for exclusively seasonality regarding the cause of the acute form of dermatosis, because acute urticaria is a disease that lasts less than 6 weeks. The underlying cause can be determined in approximately 15-20 % of cases. However, in most patients with chronic urticaria, which persists for more than 6-8 years, the main cause of the disease can be determined much more often (65-68 %) [13]. That is why, in our study, there are practically no patients with a seasonally dependent form of acute dermatosis. *Among male patients* who had an aggravating medical history due to the *seasonality* factor, a slight tendency ( $p = 0.077$ ) was found for a higher percentage of patients with chronic urticaria of a mild course (30 %) compared to patients with an acute form of dermatosis of a similar course (0 %). *Among sick*

women, in whom the development of symptoms of urticaria was probably associated with seasonality, a significantly ( $p<0.05$ ) higher percentage of patients with severe chronic urticaria (40 %) compared to patients with an acute form of severe dermatosis (0 %); and the percentage of women with mild chronic urticaria (30 %) has a slight tendency ( $p=0.077$ ) to be higher compared to patients with acute mild dermatosis (0 %).

Aquagenic urticaria is a form of induced dermatosis in which contact with any source of water, regardless of its temperature or pH, causes small itchy swellings surrounded by foci [27]. The diagnosis is based on the anamnesis, the results of a water provocation test and is often easier compared to other forms of urticaria. Given the fact that the humidity factor is one of the most frequent provoking factors, contact with water is practically inevitable in many spheres of human activity, and urticaria "manages" to manifest itself as an acute or chronic form of dermatosis [24]. Among *male patients*, in whom the development of symptoms of urticaria was probably related to the presence of the *moisture factor*, we reliably ( $p<0.05$ ) found a higher percentage of patients with chronic urticaria of a mild course (90 %) compared to patients with a chronic form of severe dermatosis (30 %) and with patients with an acute form of mild dermatosis (30 %). Among *female patients*, in whom the development of symptoms of urticaria was probably associated with the presence of the humidity factor, a higher percentage of patients with acute urticaria of a mild course (60 %) was found to be reliable ( $p<0.05$ ) compared to patients with a chronic form of dermatosis of a mild course (10 %).

The available scientific literature shows the predominance of women over men in terms of the frequency of occurrence of aquagenic urticaria [26]. In our study, on the contrary, among *men* suffering from mild chronic urticaria, in whom the development of urticaria symptoms was probably associated with the presence of the *moisture factor*, a significantly ( $p<0.01$ ) higher percentage of men (90 %) compared to women of a similar comparison group (10 %).

An episode of urticaria caused by air pollution can last from a few minutes to a few hours or years. Symptoms usually disappear on their own after stopping its use. The long-term prognosis of air-induced urticaria varies widely. Sometimes the condition stops occurring after a few years, but it can last for a long time. Many people cope well with this condition by changing their lifestyle regardless of the form of dermatosis and gender [15]. Based on the presence of the *air factor*, we also did not establish reliable differences or trends between men and/or women with different forms and degrees of severity of urticaria.

Despite the extensive use of cosmetics, most people are unaware of its side effects. It is believed that about 95 % of women and 75 % of men used cosmetics every day. Urticaria has a more severe course and a more common side reaction caused by cosmetics, especially in

women due to its more frequent use [12]. Thus, among *women* patients with acute urticaria of a severe course, in whom the development of symptoms of the disease was probably associated with the presence of a factor of a chemical substance or cosmetics, we established a significantly ( $p<0.05$ ) higher percentage of people (60 %) compared to men of a similar comparison group (10 %).

Solar urticaria is a chronic acquired photosensitivity disorder. It consists of recurring episodes of hives on areas of the skin that are exposed to sunlight. Although usually a benign condition, it can be extremely disabling as the severity of the course increases over the years, limiting daily activities and severely altering patients' quality of life [10]. That is why the percentage of patients with the chronic form of this dermatosis is much higher than the similar indicator for the acute form. All skin types and ethnic groups are affected worldwide, slightly more commonly in women than in men [19]. In our study, among *sick women*, in whom the development of symptoms of urticaria was probably associated with the presence of the *insolation factor*, a higher percentage of patients with chronic urticaria of a mild course (60 %) compared to patients with an acute form was established reliably ( $p<0.05$ ) mild dermatosis (10 %) and a slight tendency ( $p=0.077$ ) to higher values in women with chronic severe dermatosis (30 %) compared to patients with acute urticaria of similar severity (0 %). However, among *men* with acute urticaria of a severe course, in whom the development of urticaria symptoms was probably associated with the presence of the *insolation factor*, a significantly ( $p<0.05$ ) higher percentage of individuals (40 %) compared to women of the same comparison group was found (0 %).

According to the presence of the factor of *hormonal changes*, we did not establish any reliable differences or trends between women with different forms and degrees of severity of urticaria. This is explained by the fact that dermatosis can be associated with some diseases and conditions characterized by hormonal changes, including endocrinopathy, the menstrual cycle, pregnancy, menopause and the use of hormonal contraceptives or hormone replacement therapy, and there is no clear dependence on the severity of the manifestation and the form of dermatosis [3].

Rashes in the form of urticaria can appear from 1-2 hours to 15 days after oral administration of drugs. Rashes appear faster with intravenous administration of drugs than with oral administration, and most often this form of dermatosis takes on a severe course [16]. Similarly, in our study, among *sick women* in whom the development of symptoms of urticaria was probably related to the presence of the *factor of taking medication*, a higher percentage of patients with acute urticaria of a severe course (40 %) compared to patients with a similar form of mild dermatosis (0 %). Also, among *women patients* with acute urticaria of a severe course, in whom the development of urticaria symptoms was probably associated with the presence of

the factor of taking medication, a significantly ( $p < 0.05$ ) higher percentage of people (40 %) compared to men of the same group was found comparison (0 %).

According to the presence of the *food factor, bad habits and burdened heredity*, no reliable differences or trends have been established between men and/or women with different forms and degrees of severity of urticaria.

Manifestations of urticaria may vary from person to person. Sometimes a rash and swelling can appear for a short time and disappear quite quickly. But most often they disappear in one place and appear in another area. At the same time, urticaria is often accompanied by severe itching or even a burning sensation and pain. If the rash covers deep tissues, hands, eyelids, limbs, tongue and genitals, such course of dermatosis is considered severe [23]. According to the presence of *pruritus*, we did not establish reliable differences or trends between men and/or women with different forms and degrees of severity of urticaria. However, among women patients with *burning sensation in the area of skin lesions*, a significantly ( $p < 0.01$ ) higher percentage of patients with acute urticaria of a severe course (100 %) compared to patients with a similar form of dermatosis of a mild course was established (30 %).

Among male patients with *pain in the area of skin lesions*, a significantly ( $p < 0.05-0.01$ ) higher percentage of patients with acute (60 %) and chronic (70 %) urticaria of a severe course compared to patients with similar forms of dermatosis of a mild course was established (respectively 0 % and 10 %). Also, among female patients with *pain in the area of skin lesions*, a significantly higher percentage ( $p < 0.01$  in both cases) of patients with acute (70 %) and chronic (60 %) severe urticaria compared to patients with similar forms of mild dermatosis was found (0 % in both cases).

Among sick men with *localization of skin lesions on the scalp*, a significantly higher percentage ( $p < 0.05$ ) of patients with severe chronic urticaria (40 %) compared to patients with acute severe dermatosis (0 %) was found; and among sick women with *localization of skin lesions on the scalp*, a significantly ( $p < 0.05$ ) higher percentage of patients with acute urticaria of a severe course (40 %) compared to patients with a similar form of dermatosis of a mild course (0 %). In addition, among women patients with acute urticaria of a severe course with *localization of skin lesions on the scalp*, a significantly ( $p < 0.05$ ) higher percentage of people (40 %) compared to men of the same comparison group (0 %) was found.

Among male patients with *localization of skin lesions on the face*, a tendency ( $p = 0.067$ ) was established for higher values in patients with a chronic form of dermatosis of a mild course (50 %) compared to female patients with an acute form of urticaria of similar severity (10 %).

Among male and female patients with *lesions localized on the mucous membrane*, a significantly higher percentage ( $p < 0.05-0.01$ ) of patients with acute urticaria of a severe course (40 % and 60 %, respectively) compared

to patients with an acute form of mild dermatosis (0 % in both cases).

According to the *localization of skin lesions on the trunk*, no reliable or trending differences between men and/or women with different forms and degrees of severity of urticaria were established.

Among male patients with *localization of skin lesions on the extremities*, a significantly higher percentage ( $p < 0.05$ ) of patients with severe chronic urticaria (100 %) compared to patients with mild chronic dermatosis (60 %) was found. Among female patients with *localization of skin lesions on the extremities*, a significantly higher percentage ( $p < 0.05$ ) of patients with mild acute urticaria (80 %) compared to patients with chronic mild dermatosis (30 %) was found. Also, among male patients with *localization of skin lesions on the extremities*, a slight tendency ( $p = 0.077$ ) was established for higher values of the percentage of patients with severe chronic urticaria (100 %) compared to women with a similar form and severity of dermatosis (70 %).

According to the *presence of urticarial spots on the skin*, no reliable or trend differences were established between men and/or women with different forms and degrees of severity of urticaria.

If the rash affects deeper tissues, the patient may develop angioedema, which can develop rapidly. At the same time, there is a tightening of the skin, when pressing on the soft tissues, a dent is noted. Especially dangerous is damage to the respiratory organs, which requires urgent medical assistance [12].

Among sick men with the *presence of angioedema of the skin*, a significantly higher percentage ( $p < 0.05-0.01$ ) of patients with acute (100 %) and chronic (90 %) severe urticaria compared to patients with similar forms of mild dermatosis (respectively 30 % and 40 %). Also, among sick women with the *presence of angioedema of the skin*, a significantly higher percentage of patients with acute (90 %) and chronic (100 %) urticaria of a severe course was established ( $p < 0.01$  in both cases) compared to patients with similar forms of dermatosis of a mild course (10 % and 20 %, respectively).

According to the *presence of red persistent dermatographism*, no reliable differences or trends were established between men and/or women with different forms and degrees of severity of urticaria.

The Dermatology Quality of Life Index is used in clinical trials to determine the psychological impact of skin conditions and the benefits of treatment. This method includes a survey on regular use and quality assessment of patients with dermatological diseases. L. Lugovic-Mihic and others [17] significantly higher values of this indicator were recorded in patients with a severe course of atopic dermatitis compared to patients with a mild course of the disease. A significant number of patients with high scores experienced anxiety, insecurity, and the impact of the disease on leisure time.

Both among sick men and among sick women, we

established a significantly ( $p < 0.001$  in all cases) higher value of the *dermatological quality of life index* in patients with acute ( $17.70 \pm 4.97$  and  $20.30 \pm 3.53$  points, respectively) and chronic ( $18.80 \pm 4.85$  and  $22.80 \pm 3.49$  points) of severe urticaria compared to patients with acute (respectively  $7.600 \pm 2.066$  and  $8.100 \pm 2.514$  points) and chronic (respectively  $9.400 \pm 2.221$  and  $9.000 \pm 2.667$  points) forms of mild dermatosis. Also, a significantly ( $p < 0.05$ ) higher value of the dermatological quality of life index ( $22.80 \pm 3.49$  points) compared to men of the same comparison group ( $18.80 \pm 4.85$ ) was found among women with severe chronic urticaria.

Thus, the above comparative analysis of the priority of factors between persons with a severe and mild course, in turn, contributes to the effective control of an active disease and the creation of conditions for a long period of remission in this disease. The study of these factors allows you to prevent the transition of an acute form of urticaria into a chronic one, which will be much more difficult to get rid of without timely diagnosis and treatment. Most of these factors are well modifiable both in the social and household aspect, and in the preventive and organizational aspect, which allows to achieve control over the symptoms of urticaria and increase the quality of life of patients, guided by their gender characteristics.

## Conclusion and prospects for further developments

1. The obtained results revealed that, regardless of the form of urticaria (acute or chronic course), among patients with a severe course, the following prevail: men who have a physical nature of work, an allergic reaction, a stress

factor in the anamnesis, pain in the area of skin damage, on the mucous membrane, on the extremities, there is angioedema of the skin and a higher value of the dermatological index is noted, as well as women who have an allergic reaction and there is a factor of taking drugs, there is pain in the affected area of the skin, on the scalp and mucous membrane, there is angioedema skin and a higher value of the dermatological index is noted. Among patients with a mild course, the following predominate: men, who have the mental nature of work and the presence of the humidity factor, and women with the insolation factor.

2. Among patients with the acute form of urticaria, there is a predominance of men who have the mental nature of work and women with the presence of the humidity factor, a burning sensation in the affected area of the skin and on the limbs. Among those suffering from the chronic form, the following predominate: men with the presence of an allergic reaction, with the presence of a seasonality factor, with localization of skin damage on the scalp and skin on the face, and women with a mixed nature of work, a seasonality factor, insolation.

3. In men, compared to women, the factors of temperature, humidity and insolation and the existing localization of skin lesions on the extremities are priorities. In women, allergic reactions, chemicals or cosmetics, medication, localization of skin lesions on the scalp and a higher value of the dermatological index prevail more often as factors.

In further research, it is planned to study the phenotypic predictors of the occurrence and features of the course of urticaria, as which constitutional features of the human body will be used.

## References

- [1] Annabathula, A., Priya, S., & Srinivas, C. R. (2018). Kumkum-induced allergic contact dermatitis: Are we missing the actual culprit? *Indian Journal of Dermatology, Venereology and Leprology*, 84(2), 153-156. doi: 10.4103/ijdv.IJDVL\_45\_17
- [2] Arshad, S. H., Karmaus, W., Zhang, H., & Holloway, J. W. (2017). Multigenerational cohorts in patients with asthma and allergy. *Journal of Allergy and Clinical Immunology*, 139(2), 415-421. doi: 10.1016/j.jaci.2016.12.002
- [3] Bernstein, J. A., Bouillet, L., Caballero, T., & Staevska, M. (2021). Hormonal effects on urticaria and angioedema conditions. *The Journal of Allergy and Clinical Immunology: In Practice*, 9(6), 2209-2219. doi: 10.1016/j.jaip.2021.04.021
- [4] Beyaz, S., Demir, S., Oztup, N., Karadag, P., Coskun, R., Colakoglu, B., ... & Gelincik, A. (2021). Psychological burden of COVID-19 on mild and moderate chronic spontaneous urticaria. *In Allergy Asthma Proc* (pp. e107-e115). doi: 10.2500/aap.2021.42.210026
- [5] Curto-Barredo, L., Pujol, R. M., Roura-Vives, G., & Gimenez-Arnau, A. M. (2019). Chronic urticaria phenotypes: clinical differences regarding triggers, activity, prognosis and therapeutic response. *European journal of dermatology*, 29(6), 627-635. doi: 10.1684/ejd.2019.3674
- [6] De Martinis, M., Sirufo, M. M., & Ginaldi, L. (2019). A "stadium" urticaria, cold urticaria is still a mostly unknown disease, with a wide spectrum of severity degrees and few therapeutic certainties: is omalizumab one of these? reflections from a clinical case report. *Iran. Red. Crescent. Med. J.*, 21(1), 84250. doi: 10.5812/ircmj.84250
- [7] Finlay, A. Y., & Khan, G. K. (1994). Dermatology Life Quality Index (DLQI)-a simple practical measure for routine clinical use. *Clinical and experimental dermatology*, 19(3), 210-216. doi: 10.1111/j.1365-2230.1994.tb01167.x
- [8] Fukumoto, T., Ogura, K., Fukunaga, A., & Nishigori, C. (2018). Aquagenic urticaria: severe extra-cutaneous symptoms following cold water exposure. *Allergology International*, 67(2), 295-297. doi: 10.1016/j.alit.2017.10.007
- [9] Gabrielle, P. E. C. K., Hashim, M. J., Shaughnessy, C., Muddasani, S., Elsayed, N. A., & Fleischer, A. B. (2021). Global epidemiology of urticaria: increasing burden among children, females and low-income regions. *Acta Dermato-Venereologica*, 101(4), adv00433. doi: 10.2340/00015555-3796
- [10] Haylett, A. K., Koumaki, D., & Rhodes, L. E. (2018). Solar urticaria in 145 patients: Assessment of action spectra and impact on quality of life in adults and children. *Photodermatology, photoimmunology & photomedicine*, 34(4), 262-268. doi: 10.1111/phpp.12385
- [11] Kanani, A., Betschel, S. D., & Warrington, R. (2018). Urticaria and angioedema. *Allergy, Asthma & Clinical Immunology*, 14(2), 1-13. doi: 10.1186/s13223-018-0288-z
- [12] Kocaturk, E., & Grattan, C. (2019). Is chronic urticaria more than skin deep?. *Clinical and translational allergy*, 9(1), 1-9. doi: 10.1186/s13601-019-0287-2
- [13] Kolkhir, P., Gimenez-Arnau, A. M., Kulthanan, K., Peter, J., Metz, M., & Maurer, M. (2022). Urticaria. *Nature Reviews*

- Disease Primers*, 8(1), 61. doi: 10.1038/s41572-022-00389-z
- [14] Konstantinou, G. N., & Konstantinou, G. N. (2020). Psychological stress and chronic urticaria: a neuro-immuno-cutaneous crosstalk. A systematic review of the existing evidence. *Clinical Therapeutics*, 42(5), 771-782. doi: 10.1016/j.clinthera.2020.03.010
- [15] Li, J., Song, G., Mu, Z., Lan, X., Yang, F., Li, L., & Han, X. (2023). The differential impact of air pollutants on acute urticaria and chronic urticaria: a time series analysis. *Environmental Science and Pollution Research*, 30(6), 14656-14662. doi: 10.1007/s11356-022-22659-9
- [16] Li, X., Liu, H., Zhao, L., Liu, J., Cai, L., Liu, L., & Zhang, W. (2017). Clinical observation of adverse drug reactions to non-ionic iodinated contrast media in population with underlying diseases and risk factors. *The British journal of radiology*, 90(1070), 20160729. doi: 10.1259/bjr.20160729
- [17] Lugovic-Mihic, L., Mestrovic-Stefekov, J., Fercek, I., Pondeljak, N., Lazic-Mosler, E., & Gasic, A. (2021). Atopic dermatitis severity, patient perception of the disease, and personality characteristics: how are they related to quality of life?. *Life*, 11(12), 1434. doi: 10.3390/life11121434
- [18] Ohanyan, T., Schoepke, N., Bolukbasi, B., Metz, M., Hawro, T., Zuberbier, T., ... & Weller, K. (2017). Responsiveness and minimal important difference of the urticaria control test. *Journal of Allergy and Clinical Immunology*, 140(6), 1710-1713. doi: 10.1016/j.jaci.2017.04.050
- [19] Photiou, L., Foley, P., & Ross, G. (2019). Solar urticaria-An Australian case series of 83 patients. *Australasian Journal of Dermatology*, 60(2), 110-117. doi: 10.1111/ajd.12975
- [20] Rosman, Y., Hershko, A. Y., Meir-Shafir, K., Kedem, R., Lachover-Roth, I., Mekori, Y. A., & Confino-Cohen, R. (2019). Characterization of chronic urticaria and associated conditions in a large population of adolescents. *Journal of the American Academy of Dermatology*, 81(1), 129-135. doi: 10.1016/j.jaad.2019.02.034
- [21] Schaefer, P. (2017). Acute and chronic urticaria: evaluation and treatment. *American family physician*, 95(11), 717-724. PMID: 28671445
- [22] Seo, J. H., & Kwon, J. W. (2019). Epidemiology of urticaria including physical urticaria and angioedema in Korea. *The Korean journal of internal medicine*, 34(2), 418-425. doi: 10.3904/kjim.2017.203
- [23] Shin, M. (2021). Food allergies and food-induced anaphylaxis: role of cofactors. *Clinical & Experimental Pediatrics*, 64(8), 393-399. doi: 10.3345/cep.2020.01088
- [24] Tawil, S., Irani, C., Kfoury, R., Abramian, S., Salameh, P., Weller, K., ... & Ezzedine, K. (2023). Association of Chronic Urticaria with Psychological Distress: A Multicentre Cross-sectional Study. *Acta Dermato-Venereologica*, 103, adv00865. doi: 10.2340/actadv.v102.2939
- [25] Thomsen, S. F., Van der Sluis, S., Kyvik, K. O., & Backer, V. (2012). Urticaria in monozygotic and dizygotic twins. *Journal of allergy*, 2012, 125367. doi: 10.1155/2012/125367
- [26] Wang, F., Zhao, Y. K., Luo, Z. Y., Gao, Q., Wu, W., Sarkar, R., & Luo, D. Q. (2017). Aquagenic cutaneous disorders. *JDDG: Journal der Deutschen Dermatologischen Gesellschaft*, 15(6), 602-608. doi: 10.1111/ddg.13234
- [27] Wassef, C., Laureano, A., & A Schwartz, R. (2017). Aquagenic urticaria: a perplexing physical phenomenon. *Acta Dermatovenereologica Croatica*, 25(3), 234-234. PMID: 29252177
- [28] Wertenteil, S., Strunk, A., & Garg, A. (2019). Prevalence estimates for chronic urticaria in the United States: A sex-and age-adjusted population analysis. *Journal of the American Academy of Dermatology*, 81(1), 152-156. doi: 10.1016/j.jaad.2019.02.064

# ОСОБЛИВОСТІ КЛІНІКО-АНАМНЕСТИЧНИХ ПОКАЗНИКІВ У ХВОРИХ НА КРОПИВ'ЯНКУ УКРАЇНСЬКИХ ЧОЛОВІКІВ І ЖІНОК

Аладван А. М. А., Дмитренко С. В., Белік Н. В., Коляденко С. В., Лобода І. В.

**Анотація.** Основною реалізації оптимальної профілактики кропив'янки у більшості випадків є встановлення точних причин даного захворювання, що є далеко не простим завданням. Власне, усунення підозрілого стимулюючого подразника дозволяє досягнути ремісії, при якій стан хворого нормалізується на досить тривалий період часу і суттєво покращується якість життя пацієнта. Мета роботи - встановити особливості клініко-анамнестичних і дерматологічних показників у хворих на гостру та хронічну кропив'янку легкого та тяжкого перебігу українських чоловіків і жінок молодого віку. Проведено клініко-анамнестичне та дерматологічне обстеження 40 українських чоловіків та 40 українських жінок молодого віку хворих на гостру та хронічну кропив'янку легкого й тяжкого перебігу. Встановлення діагнозу кропив'янки проводили відповідно до міжнародного керівництва EAACI/GA<sup>2</sup>LEN/EuroGuiDerm/APAAACI. Усім хворим проведено анкетування для визначення характеру праці та різноманітних негативних факторів впливу на шкіру, а також визначення дерматологічного статусу. Для оцінки ступеня негативного впливу кропив'янки на різні аспекти життя пацієнта визначали дерматологічний індекс якості життя. Статистичну обробку результатів дослідження проведено за допомогою ліцензійного пакету "Statistica 6.0" з використанням непараметричних методів оцінки отриманих результатів. У результаті проведених досліджень встановлено, що незалежно від форми кропив'янки у чоловіків із тяжким перебігом захворювання зростає частота представників із фізичним характером праці, наявністю алергічної реакції, присутністю стресового фактору в анамнезі, наявністю болю в ділянці ураження шкіри, на слизовій оболонці, на кінцівках, присутністю ангіонабряку шкіри та більш значення дерматологічного індексу; а у жінок із тяжким перебігом захворювання - наявністю алергічної реакції, фактору прийому ліків, присутності болю в ділянці ураження шкіри, на волосистій частині голови і слизовій оболонці, ангіонабряку шкіри та більш значення дерматологічного індексу. У чоловіків із легким перебігом захворювання зростає частота представників із розумовим характером праці та присутністю фактору вологості; а у жінок із легким перебігом захворювання - фактору інсоляції. Серед хворих на гостру форму кропив'янки переважають чоловіки з розумовим характером праці та жінки із наявністю фактору вологості, відчуттям печіння в ділянці ураження шкіри і на кінцівках; а серед хворих на хронічну форму кропив'янки - чоловіки із наявністю алергічної реакції, з присутнім фактором сезонності, із локалізацією ураження шкіри на волосистій частині голови і шкіри на обличчі та жінки із змішаним характером праці, фактором сезонності, інсоляції.

**Ключові слова:** захворювання шкіри, гостра та хронічна кропив'янка, клініко-анамнестичні показники, дерматологічні показники, українські чоловіки та жінки.