

ETIOLOGY OF CHRONIC NON-ALLERGIC URTICARIA

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ABSTRACT

The chronic non-allergic urticaria /CNU/ is a frequent malady; almost 25% of a given population has suffered incidents of Urticaria. Often the causes provoking it remain undiscovered and Urticaria is defined as idiopathic. Besides this form, CNU includes physical Urticaria and urticarial reactions, the secondary causes of which are other somatic disorders (chronic infections, autoimmune diseases, malign proc-esses etc.) The effective treatment of CNU is set after precise etiological clarification. The research includes 122 patients with CNU, tested and viewed as having a somatic disorder, physical outside stimuli provoking the urticaria; as allergic reactions to the usual sensibilizing factors are excluded. With 113 of the patients the etiology of the CNU was clarified: in 55.7% of them the urticaria was connected with other somatic disorders (in 69.1% - chronic infection, and in 26.4% - with autoimmune disease). In 36.8% of the tested patients various forms of physical urticaria were proved (33.3% - cholinergic urticaria, 24.4% - cold urticaria, 15.5% - delayed pressure urticaria, 11.1% - solar urticaria). In 7.3% of the cases the urticaria was diagnosed as idiopathic. The conclusions drawn predetermine the right choice of the respective therapy and prophylactics.

Keywords: Chronic Urticaria, Physical Urticaria, Cholinergic Urticaria, Non-allergic Urticaria, delayed pressure urticaria, cold urticaria, solar urticaria

The chronic non-allergic urticaria /CNU/ is a frequent malady; almost 25% of a given population has suffered incidents of urticarial reaction (19). It is a syn-drome of the "nerve mastoid cell". It is associated with infections, autoimmune diseases, metabolic disorders, malign processes and physical stimuli. The chronic urticaria includes various forms of physical urticaria (PU), idiopathic urticaria (IU) and secondary urticarial reactions, caused by other somatic disorders.

The cases of urticaria with a length of over 6 weeks and with undiagnosed cause are defined as IU. IU covers 25-45% of all urticarial reactions and recent research shows its autoimmune genesis (10).

PU includes the subgroups of chronic urticaria, shows frequency between 14% and 17% (23,17), and is provoked by physical stimuli, such as trauma, pressure, light, cold, heat, water, vibrations.

CNU causes considerable therapy problems due to its various forms and to the mul-tidirectional treatment. This requires maximum efforts towards the etiological clarification of each concrete case and the personified and adequate treatment approach.

The present research aims to clarify the etiology of the CNU of a group of patients, tested and observed in the Clinic of Skin and Venereal Diseases - Varna.

MATERIAL AND METHODS

The research covers 122 patients with CNU, tested and observed for a period of five years in an allergology surgery. De-

pending on the clinic picture and the medical history, as well as the clinic observation, the patients were tested for somatic disorder. With those with data of PU provocative tests were held with an ice cube (with exposure from 1 to 10 minutes) and a single and repeated pressure test. All patients were tested for allergic reactions to atopens, bacterial and food allergies, pollens in order to exclude allergic genesis of the urticaria.

RESULTS AND DISCUSSION:

In 113 of the tested patients, etiological clarification of CNU was achieved (table 1): in 55.7% of the cases the urticaria was connected with another somatic disorder, in 36.8% PU was proven, and in 7.3% of the patients the urticaria was diagnosed as idiopathic due to the lack of concrete data for its causes.

Table 1. Etiology of the Chronic Urticaria (122 patients)

Etiologic Diagnosis	Number of Patients	%
Urticaria connected with other disorders	68	55.7
Physical Urticaria	45	36.8
Idiopathic Urticaria	9	7.3
Total	122	100

The data received about the frequency of CNU, associated with other diseases corresponds to that in literature. Montureux P. (1988) establishes chronic infections in 81% of the cases, but there are authors pointing to a lower percentage (23). The frequency of the PU in the research shows a percentage higher than that in literature (23), while that of IU - lower.

The patients with CNU connected with another disease showed the following distribution (table 2): in 47 patients (69.11%) a connection with chronic infections (with two people - rheumatism, with 10 - intestinal parasites, with 5 - toxoplasmosis, with 7 - hepatitis C virus infection, with 7 - *Helicobacter pylori*-infection and with 16 - with other banal infections). In 18 patients (26.7%) CNU was connected with autoimmune diseases (12 - with autoimmune thyroiditis, 1 - with Lupus erythematosus, 1 - with Dermatomyositis, 4 - with other endocrine diseases). In two patients (2.9%) the urticaria was on the background of a malign process (mediastinal tumors) and in one patient (1.4%) a hereditary angioedema was discovered.

Table 2. Etiology of the Chronic Non-allergic Urticaria, connected with other diseases

Etiologic Diagnosis	Number of Patients	%
Urticaria connected with chronic infections	47	69.1
Urticaria connected with autoimmune disorders	18	26.4
Urticaria connected with malign processes	2	2.9
Urticaria connected with genetic factors	1	1.4
Total	68	100

The variety of chronic infections, causing CNU which were established during the research correlate with those in literature: CNU, associated with hepatitis C virus infection (28,18), with rheumatism (19), with intestinal parasites (11). A number of authors point to the direct and indirect role of *Helicobacter pylori* infection in the development of CNU (27,30).

The connection CNU - autoimmune or another endocrine disorder is discussed at length in literature (9) as the autoimmune thyroiditis is named as the most frequent urticaria cause (9), as well as the tendency of an increase of these cases (13). The urticaria is assumed to be an autoimmune disorder (12), proven in over 25% of the cases (11). Many authors find in 45-50% of the CNU a skin autoimmune disorder (14). The CNU is rarely connected with a malign process; the risk of such a connection is 3% (26).

The physical forms of the CNU in the research showed the following distribution (Table 3): U. cholinergica was found in 15 patients (33.3%), U. a'frigore - in 11 patients (24.4%), U a'pressionem I in 7 patients (15.5%), symptom-

atic dermo-graphism - in 7 patients (15.5%) and U. solar - in 5 patients (11.1%).

Table 3. Etiology of the Physical Forms of Chronic Non-Allergic Urticaria (45 patients)

Etiological Diagnosis	Number of Patients	%
U. cholinergica	15	33.3
U. a'frigore	11	24.4
U a'pressionem	7	15.5
Symptomatic dermographism	7	15.5
U. Solar	5	11.1
Total	45	100

The Cholinergic Urticaria according to literature data varies from 4% (8) to 56% (17) among all forms of chronic urticaria. A number of authors find it more often in the atopens (15) than in the general population. The agents provoking it could be various: stress (15), perspiration (15), physical exertion (31), taste stimuli (29), haemodialysis (2).

Urticaria a'pressionem is described as a form of PU, with frequency of 5% (8) among adults and 24% among children, more often met in the atopens, mediated by histamine, appearing quickly after pressure and with wheals duration of 30 minutes. Another form of Urticaria a'pressionem is the urticaria caused by pressure - delayed type when pressure on the skin makes the mastocytes join the process, but with an unknown mediator (7,3) and probably a cellular-based reaction (3). This type of urticaria appears 4 hours after the appliance of the physical stimulus and lasts up to 3 days. The data received from the research of Urticaria a'pressionem (15.5%) includes both types of pressure urticaria reactions. It has to be taken into account that the delayed type pressure urticaria very often combines with other forms of chronic urticaria; with IU (10), with cold - 2% and with cholinergic - 11% (1), as well as with delayed dermographism (1,5).

The cold urticaria is described as inherited (16) or acquired (24). It can be associated with cryoglobulinemia (20), associated with vasculitis (6) or virus infections (4).

The solar urticaria is among 4% to 5.3% of the cases of the photodermatoses (25), more often associated with atopy. It is viewed as an IgE mediated reaction, caused by photo allergens with various length of the waves (21) or by nonspecific photo allergens as photo protection or anti-microbial means, fragrances, medicaments as promethazin, chlorpromazine.

CONCLUSIONS

With the etiology of the CNU considerable importance have the chronic infections, autoimmune diseases and different physical stimuli (cold, pressure, physical exercises, sun light). The detail clarification of the causes of the urti-

caria in every single case determines the suitable and adequate methods and possible therapy.

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