Systemic enzyme therapy in the treatment of neurodermitis (atopic dermatitis) patients

Samtsov A.V., Mazurov V. I., Tabachnov V.V. Systemic enzyme therapy in the treatment of neurodermitis (atopic dermatitis) patients. Skin and Venereal Diseases Department of Sankt-Petersburg’s

Abstract: Combined hydrolytic enzymes are used for different diseases treatment for years. Before more than 25 years M. Wolf and K. Ransberger successfully introduced the method of systemic enzymotherapy. However there are not publications in Russian and foreign medical sources devoted to application of the method in dermatology, in particular for neurodermitis (also known as atopic dermatitis — AtD) treatment. Because the course of many dermatosis has chronic and relapsing character and traditional basic therapy schema have not the desirable clinical effects, the new drugs and treatment methods development is of great importance. These new drugs and methods have to control successfully the course of the illnesses, preventing complications and having minimal side effects. We decided to test the therapeutical effectiveness and properties of Wobenzym drug (the first in the line of systemic enzymotherapy drugs) at AtD patients treatment.

The study was conducted at Skin Diseases Clinic of Military Medicine Academy (Sankt-Petersburg, Russia) for 12 months as open test. There was 18 patients with AtD in the treatment groups. The patients received a monotherapy with Wobenzym as well as combined treatment with basic treatment schema. The control group of 15 patients of similar age and clinical characteristics was formed for the clinical results evaluation and comparative analysis.

Our study demonstrated, that Wobenzym application positively influence all the AtD manifestations and allows the more stable remission. All the patients endured the drug well.

Introduction: The Wobenzym is known as antitumor, immunomodulative, thrombolytic and secondary analgetical agent. It is known also that systemic enzymotherapy drugs can decompose and eliminate circulating immunocomplexes, stopping by the fact the development of autoimmune diseases. It allowed to conduct a study of its therapeutical activity on AtD patients treatment at the Skin Diseases Clinic of Military Medicine Academy (may 1997 - may 1998) with due regard to the comprehensive therapeutical principle — reliability and effectiveness with good its endurance by the patients.

The problem of AtD is still actual in dermatology due to the extent to which the dermatosis has been disseminated (from 5 to 30% in the whole spectrum of skin pathology according to the different data) and insufficient effectiveness of existing treatment methods6, 12.

It is known that AtD is a chronic dermatosis with tendencies to acute conditions at spring and autumn. Its etiology is polyfactoral, and its pathogenesis is not clear yet. At present times the opinion is often heard that the neurogen disfunctions may have secondary character. The studies of Toropova and Sinyavskaya (1986) have shown the role of inborn genetically mediated fermentopathy of alimentary canal (AC) in children, which causes the state of manifested endogen intoxication14,15.

Ferment insufficiency of the stomach and intestine with disbacteriosis and diskinesy of gall ducts is apparent by failure of important food ingredients assimilation and by the synthesis of autoaggressive complexes of toxic and autoallergen character — circulating immune complexes (CIC). Neuroendocrine disfunctions, pathological state of the calicrein-chinaire system, break of the cateholamines production and their activity occur at these conditions. Immunodeficit state peculiar to the AtD patients is manifesting by cell and humoral immunity factors disfunction and is accompanied by reducing the whole quantity of T-lymfocytes, especially of T-suppressors, by increasing of the quantity eosinofilis, by reducing of IgM and IgA levels and increasing of IgG-level, and increasing of IgE in many times. The latter is mainly caused by reagins (IgE-AT) having a leading role in development of the allergic atopic process. Having in mind all the above mentioned and the fact that any of applied basic therapy schemes does not able to provide a stable clinical effect, we suggest that aprobation of the systemic enzymotherapy method and Wobenzym drug may by expedient and logical.

Criteria for patients
A reliable AtD diagnosis.
Different deviations in the AC functions in anamnensis.
Anamnesis excluding a respiratory atopy (bronchial asthma, vasomotor cattarh).
According to B. T. Gluhenky and S. A. Grando these conditions have place at 25% of AtD patients and their treatment using ferments in form of active proteinases is inexpedient according to their studies.

Our study was 12-month open test and there was 18 AtD patients (12 men and 6 women) in the age from 15 to 62 years (an average age was 24.7 years old) In almost all the patients the illness has developed in childhood (before the 7 years old).

According to patients' complaints, anamnesis study and results of examining fulfilled there was evident the alimentary dysfunction in all the patients (in forms of cholecystitis, pancreatitis, gastritis, colitis with disbacteriosis etc.).

The patients were divided into two groups. The first one consisted of 6 patients (4 men and 2 women) who received monotherapy with Wobenzym; the second group included 12 patients (8 men and 4 women) who combined receiving Wobenzym with traditionally used schemes of basic therapy. There was also a control group of 15 patients (10 men and 5 women) who received the basic AtD therapy for comparative study of the clinical study results.

All the patients from experimental groups received the drug according to the equal scheme: at first two days of treatment — 2 dragee x 3 times a day, after that — 5 dragee x 3 times a day (30-40 min. before a meal with substantial quantity of water (more than 200 ml.). The course of systemic enzymotherapy continued 1, 5-2 months depending on the time of approaching of desirable clinical effect.

As all the patients were in an acute period of the disease when symptoms are most manifestating, the time of the acute period transition to the period of stabilization and further improvement were of great interest.

The criteria of effectiveness were following:

- The dynamics of local symptoms: a level of marked skin itching, lichenification, erythema, skin driedness and it's turgor.
- The labor data: leucocytes formula, ESR (Erythrocyte Sedimentation Rate), blood proteins, C-reacted protein, lipid metabolism state, quantity and quality evaluation of immune T- and B-cells, CIC, immunoglobulins. We also took into account the levels of ALT and ACT for the aim of the study results evaluation.
- The subjective evaluation of the treatment results by the patient using three-degree scale: "good", "moderate manifestation" and "weak".

A comparative analysis of the treatment results in experimental groups and in the control one taking into account the stability of the remission attained.

Results

Fig 1. Dynamics of the skin itching manifestation depending on the type of treatment

As shown on the fig.1 there was more intensive skin itching in the experimental patients groups during the first 3-4 days of treatment (in the monotherapy group — 50% of patients, in the combined therapy group — 30% of patients), however in further days the intensity of itching became rapidly decrease. Thus up on the 10th day in average the intensity of skin itching became insignificant or disappeared at all in the group with combined treatment, on the 15th day — in the control group and on the 18th day — in the group with monotherapy. Consequently the systemic enzymotherapy even by the monotherapy scheme is able to reduce skin itching manifestations, and its combination with basic treatment provided an acceleration of the desirable effect to 5 days (x 1,5).

Fig 2. Dynamics of the erythema-lichenoid state manifestation depending on the type of treatment

An initial skin itching intensity increasing (short-term, during 3-4 days) could be explained by the Wobenzym’s ability to stimulate inflammatory processes by activation the callicrein-chinin system and by further its transition to the settling stage.

Results (fig.2) show the durable and rather manifested effect in the combined treatment group of patients (erythema-lichenoid skin manifestations became insignificant or practically settled in average up to the end of the 4th week, and in control group the same effect was 2 weeks later). In the Wobenzym-monotherapy group of patients the effect was also evident, but it was less manifested. The facts are indicative, at first, that the Wobenzym is effective even as monotreatment drug and, secondly, that additional basic AtD treatment
is necessary. The latter leads to the desirable results in significantly shorter terms.

An evident confirmation of greater effectiveness of combined systemic enzymotherapy with basic AtD treatment is the fact that remission terms are significantly longer (according to our data up to 2.5-3 months in average) and the relapse duration and its manifestation is shorter. Five patients (4 men and 1 woman) which were under our examination in 6 and more months had not relapses at all. It must be also noted that 10 from 18 patients treated by Wobenzym continued its taking (2 dragee x 3 times a day) during 3 months after our experiment as supporting preventive treatment. They are those patients who demonstrate the most prolonged time of relapse manifestation or its absence during the time of observation.

Fig.3. The subjective evaluation of the treatment applied by the patients themselves after 1 month.

Among the labor showing it must be noted reducing the total quantity leucocytes up to the normal values including eozyonofils, normalization of the total blood protein level due to globulins fractions reducing, increasing of activity of T-cells immunity, reducing of the ratio T-helpers/T-suppressors due to increasing of the T-suppressors quantity, a reliable CIC reducing as well as IgG and IgE. The labor analysis dynamics of the patients, taking Wobenzym combined with basic treatment, also was more manifesting.

In conclusion
The open 12-month study conducted at Skin and Venereal Diseases Clinic of Military Medicine Academy (Sankt-Petersburg, Russia) and devoted to analysis of therapeutical effectiveness of Wobenzym drug (Mucos-Pharma, Germany) has clearly demonstrated its influence on the AtD course. As a rule the realization of the drug's treatment potential begins from the first days of the treatment applied and continues during all the time of treatment. There is not reducing of the drug effectiveness and accustomization to it eventually — on the contrary, it is evident clearly manifested increasing of the positive effects.

Applying Wobenzym combined with traditional for the dermatosis treatment methods allows reaching better results.

Taking Wobenzym in supporting doses (2 dragees x 3 times a day) in remission period provides more stable remission. In case of relapse its course has less manifested character.

There were not side effects due to Wobenzym treatment in any of patients excluding the fact that in first 4-5 days there was insignificantly increase of skin itching and more manifested erythema in some patients. It may be explained by the drug's pharmacological properties to speed up and modulate inflammatory processes as well as by local microcirculation improvement7, 8, 10.

The results of our study support the fact that systemic enzymotherapy method (with Wobenzym) which was successfully applied in medical practice, may be also successfully applied in combined therapy of the AtD patients.

Sources