THE PRESENCE OF RELATED CONDITIONS IN PATIENTS WITH DRUG ALLERGIES

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Abstract*. At present time more and more attention is paid to the phenomenon of concomitant pathologies in drug allergies. In the given article 30 cases of drug allergies in patients of the allergology department of Tashkent City Clinical Hospital N. are analyzed 5 in order to study the influence of concomitant diseases on the course of drug hypersensitivity. Patients with drug allergies included in the study were divided into 3 groups: with comorbid atopic diseases, with concomitant somatic diseases and without concomitant pathology. Among the etiological factors of drug allergies, β-lactam antibiotics and non-steroidal anti-inflammatory drugs predominated. The results obtained indicate an expansion of the spectrum of drug sensitization and an increase in the severity of drug allergies in the presence of concomitant chronic diseases. Atopy did not significantly affect the course of drug allergies.*

Keywords*: drug allergy, comorbidity, atopy, β-lactam antibiotics, non-steroidal anti-inflammatory drugs.*

Relevance. It is important to suggest that at present time the safety of pharmacotherapy has become of particular relevance to practitioners. The reason for that is the prevalence of complications of drug therapy. Very frequently patients receiving medications develop toxic and allergic reactions, and there are hereditary side reactions. Drug allergy (DA) is an undesirable drug reaction that develops through immune mechanisms as a result of the patient's hypersensitivity to drugs.

It should be mentioned that the frequency of drug intolerance accounts for 15% of all adverse reactions of pharmacotherapy and occurs in 7% of the global population [6]. Even 20 years ago, an increase in the number of patients with drug allergies (DA) requiring emergency medical care and hospitalization was registered [3]. The urgency of the problem is enhanced by such phenomena as polypharmacy and self-medication, which are most typical for people suffering from several chronic diseases [7].

It is not a secret that the presence of several chronic diseases interconnected by similar pathogenetic mechanisms is called comorbidity. Comorbid diseases increase the risk of PA, aggravate its course and affect the mechanisms of allergic hypersensitivity to drugs [5].

Purpose of the study: to study the etiological and clinical features of PA in patients with comorbid diseases.

Materials and methods of research. The study included 30 patients with LA, hospitalized patients in the allergology department of Tashkent City Clinical Hospital N. 5 from 2022 to 2024. Patients included in the study were divided into three groups:

Group I - patients with LA suffering from both atopy and non-atopic somatic diseases (n=8);

Group II - patients with LA and concomitant non-atopic diseases (n=12);

III (control) group - patients with LA and no concomitant diseases (n=10);

The average age of patients in group I was 44±0.7 years, in group II - 48.1±2.3 years, group III was the youngest - 34.1±2.8 years.

Group I consisted entirely of women, while in the other two the proportion of men was 25.4% in group II and 41.8% in group III ($p < 0.05$). To analyze the data obtained, methods of descriptive statistics (calculation of average values, standard deviation) and methods of correlation analysis (calculation of the Pearson coefficient, point-bisector coefficient) were used. The critical level of significance when testing statistical hypotheses in this study was taken equal to 0.05.

Research results. A family history of atopic diseases was noted in 19.78% of patients in group I, in 11.33% of patients in group II and 26.34% in group III. That is, in this study, in patients with comorbid diseases, atopic heredity was noted 2 times less often than in the control group, in which a family history burdened with atopy was recorded in every fourth patient.

In the structure of atopic diseases in group I, 55% of those studied had allergic rhinitis and conjunctivitis, 45% had bronchial asthma, and 45% of patients suffered from hay fever. The totality of clinical forms of atopic diseases in group I exceeded 100%, since atopy is characterized by multimorbidity. 42.5% of patients in group II suffered from arterial hypertension and 46.8% from coronary heart disease. In group I, the proportion of these diseases was significantly lower (32.1% and 34.21%, respectively). In addition, in group II, a significant proportion were cardiosclerosis (26.4%), oncopathology (12.3%), chronic pancreatitis (11.1%), urolithiasis (15.3%), biliary dyskinesia (7.2 %). Thus, the most common were cardiovascular comorbid diseases, neoplasms, diseases of the gastrointestinal tract, genitourinary and respiratory systems, endocrinopathies, etc. were less common.

In the etiology of LA in all groups, β-lactam antibiotics predominated: in group I in 62% of cases, in group II – 35.3%, in group III in 52% of cases. However, in group II, in every fourth case, the cause of the development of PA was non-steroidal anti-inflammatory drugs, which accounted for 25.7% of cases. These research results correspond to the trend that has developed over the past 15 years: both at the beginning of the 21st century and today, β-lactam antibiotics are leaders in the list of drugs that cause LA. [2, 4, 1]. It is noteworthy that in patients with comorbid diseases, the etiology of PA was more diverse and, along with the above, included anticonvulsants (4.9%), anesthetics (5.03%), and muscle relaxants (3.08%).

A significant proportion (40%) of patients with concomitant chronic diseases (group II) previously suffered from drug hypersensitivity. In patients with atopy (group I) and in patients in the control group (group III), this fact was noted 1.7 and 2.6 times less often (23.6% and 15.4% of cases, respectively).

As can be seen from the data presented in Table 1, in all studied groups the main clinical manifestation of LA was acute urticaria. In patients with comorbid diseases, it developed 1.8 times less often. However, only in this group, every 5 LA occurred in the form of anaphylaxis, which has the same pathogenesis, but a more severe course. It is worth noting that both acute urticaria and systemic anaphylaxis are urgent allergic conditions that develop in an immediate manner and require special attention. In addition, in almost every tenth patient with comorbid diseases, PA proceeded in the form of another extremely severe, life-threatening Stevens-Johnson syndrome, and 1/3 of the patients in this group had another severe form of PA - toxicdermia. In patients with atopy, toxicermia was observed almost 2 times less often, and Stevens-Johnson syndrome was not diagnosed in any patient. Patients in the control group did not have both of these severe syndromes.

The main clinical manifestations of LA were complicated by the development of allergic vasculitis in 23.4% of patients in group I and in 26.4% of group II, and only in every eighth patient in the control group. In a number of patients with comorbid pathology, drug-induced hepatitis was also associated.

Table 1.

Clinical syndromes of PA in the study groups (% in group)

Syndrome\group	I	II	III
Acute urticaria	45,3	25,2	31,5
Anaphylactic reaction	0,00	18,8	0,00
Stevens-Johnson syndrome	0,00	11,2	0,00
Toxidermy	16,98	34,2	0,00
Allergic vasculitis (the main manifestation of LA)	0,00	7,6	0,00
Allergic vasculitis (complication of LA)	23,4	26,4	11,6
Drug-induced hepatitis (complication)	0,00	5,2	0,00

The analysis of the need for prescribing systemic glucocorticosteroids (GCS) to relieve symptoms of PA showed the greatest need for them not only in patients with atopy, but also in patients with comorbid diseases.

The latter, in addition, had the highest average daily dose of GCS and the average duration of their administration (Table 2).

Table 2.

The need for corticosteroids for the relief of pulmonary hypertension in the study groups

Indicator\Group	IA	IБ	II
Proportion of patients receiving GCS (%)	100,00	88,7	73,2
Average daily dose of GCS for prednisolone (mg/kg)	1,26±0,55	1,6±0,22	1,3±0,35
Average duration of treatment with GCS (days)	6,10±0,90	8,1±0,79	3,9±0,81

In the main groups (I and II), more than 75% of patients needed the prescription of antihistamines (AGDs), which is twice as high as this figure in the control group.

In patients with concomitant diseases, the duration of their use was twice as long as compared to the control group (Table 3).

Table 3.

The need for antihistamines in the study groups of patients with LA

Indicator\Group	IA	IБ	II
Demand for antihypertensive drugs (%)	81,00	79,75	35,4
Duration of use of antihistamines (days)	5,9±2,4	10,01±0,75	4,5±0,45

The duration of hospitalization was shorter in the control group - 6.8±1.42 days, while in group I it was 8.9±2.1 days. In group II, that is, in patients with comorbid diseases, this indicator was the highest and amounted to 11.8 ± 1.67 days.

Conclusions:

1. The most common cause of LA development was ß-lactam antibiotics.

2. The presence of chronic diseases contributes to the expansion of the spectrum of drug sensitization.

3. In the structure of comorbid diseases of patients with LA, pathology of the cardiovascular system predominated.

4. Concomitant long-term diseases in our study increased the severity of PA, the need for systemic corticosteroids, antihistamines and increased the duration of hospitalization.

5. A history of atopy and family history did not significantly affect the course of PA in comparison with the control group.

REFERENCES

1. Eliseeva T.I., Balabolkin I. Allergic reactions to drugs: modern ideas (review) // Sovrem, technol. honey. 2016. - N. 1. - pp. 159-172.
2. Namazova L.S., Matsevich M., Vertkin A.L. Drug allergies: causes // Attending physician - 2003. - N. 3. - pp. 77-79.
3. Reshetnikova I.D., Fassakhov P.S., Nizamov I.G. [and others] The place of acute allergic reactions in the structure of calls for emergency medical care // Allergology. - 2000. -N. 4. - P. 3-5.
4. Stepanova E. V. Modern aspects of diagnosis and treatment of drug allergies // Attending physician - 2009. - N. 4. - pp. 13-17.
5. Sharabchiev Yu.T., Antipov V.V., Antipov S.I. Comorbidity is an urgent scientific and scientific-practical problem of medicine of the 21st century // Medical news. - 2014. - N. 8. - pp. 6-11.
6. Demoly P., Adkinson N.F., Brockow K., and oth. International Consensus (ICON) on Drug Allergy// Allergy - 2014. - 69(4). – pp. 420-437.
7. Rambhade S., Chakarborty A., and oth. A Survey on Polypharmacy and Use of Inappropriate Medications II Toxicol Int. - 2012. - Jan-Apr. - 19(1). – pp. 68-73.