INTRODUCTION

Allergic disorders (AD) are a serious prevalence cause in all world and a significant problem to health care system in general, both for the developed and yet developing countries. At least 30% of the world population and 80% of families are suffering from AD [1].

In recent decades the number of patients with AD nearly doubled, and according to the World Health Organization forecast, in 30 years the majority of Earth population will be suffering from allergy.

For now, one of the most widespread AD is pollinosis. Frequency of its prevalence ranges from 1 to 40% [2, 3]. Pollinosis is characterized by seasonal occurrence, variety of clinical implications, possible polyvalent allergy and food sensibility development, that complicate diagnostics and treatment of this pathology. Pollinosis symptoms are caused by general inflammatory changes of mucous coats, first of all, eyes and airways, and can significantly influence patients’ lives. Clinically pollinosis occurs in the form of rhinoallergosis or rhinoconjunctivitis (to 95 % [4]), and atopic asthma.

Pollinosis peculiarities depend on a variety of factors, first of all on climate-geographically and ecologically related ones. Every region has its own distinctive spectrum of allergen plants and pollen formation calendar, in connection to that the course of disease might vary within one country or even region.

Therefore, three main periods of pollen formation are relevant for our country: spring period (April-May), summer period (June-July) and summer-autumn period (July-September). Also three main groups of plants-allergens are singled out: trees, grains and composites, the majority of which are weeds. For the first (spring) period pollen formation of trees is typical (birch, oak, alder, linden, ash, poplar, elm, acacia, willow and others). The second (summer) period is characterized by pollen formation in wild and cultivated grains (rye, corn, Poa pratensis, Phleum pratense, Festuca pratensis, Dactylis glomerata, Bromus, Lolium perenne and others). Considering the third (summer-autumn) period, pollen formation in composites (Ambrosia, Artemisia, Chenopodium, Helianthus, Cyclachaena and others) is common.

At the present moment there exist some scientific works on spectrum of aeroallergens study for certain regions. For instance, aerobiological researches distinguishing in...
THE AIM
The aim was the analysis of spectrum of causatively relevant aeroallergens of southern Ukraine which provoke allergic reaction in patients with pollinosis.

MATERIALS AND METHODS
In hindsight, we researched the data of ambulatory medical records and results of skin testing with allergens of 477 patients who applied to town allergology centre based on Kherson Town Clinical Hospital n.a. Ye.Ye. Karabelesh during the period of 2012 to 2019 years. A specific allergologic examination has been carried out by the method of skin prick-testing with allergens of Ukrainian production (Vinnytsia, LLC "Imunolog"). Established allergens of trees, composite family plants and grains, as well as domestic allergens (acarids Dermatophagoides farinae and Dermatophagoides pteronyssinus, pillow feathers, epidermal agents) were used. Patients’ examination was done during the remission period (the end of October–April). Entry criteria resulted in making pollinosis diagnosis in patients above 18 years old. Entry criteria: infant age, negative results of skin prick-testing. Statistic data estimation was performed with the help of Microsoft Office Excel 2010.

RESULTS
In the whole, ambulatory medical records and the results of skin prick-testing with of 477 patients: 250 women (52,41 %) and 227 men (47,59 %) aged from 19 to 66 years old. The average age of examined patients was 38,05±0,45.

Among pollen aeroallergens of Kherson region, the most widespread ones are composites (69,76 %). Among composites the greatest percentage showed weeds and sunflower: Ambrosia – 79,87 %, Helianthus (sunflower) – 75,68 %, Artemisia – 42,98 %, and Cyclachaena (sump weed) – 36,48 %.
and cultivated corn plants were estimated in 28,22 %. The most frequent sensibility among them was noticed to Lolium perenne (19,28 %), Festuca pratensis (17,82 %), Dactylis glomerata (17,82 %). Aeroallergens of trees registered only 2,03 %.

**DISCUSSION**

The average age of examined patients was 38,05±0,45 that confirms data of dominating disease incidence among people of young, able to work age [6].

The most widespread pollen aeroallergens of Kherson region are composites (69,76 %), that proves the similarity of spectrum of causatively relevant aeroallergens with other region of southern Ukraine, particularly Odesa, Zaporizhzhia, Dnipro regions and Temporarily Occupied Territory of Crimea [7, 8, 9, 10]. However, received data greatly differ from the spectrum of other regions of our country (for example, in Vinnytsia and Lviv regions trees took the first place, in Kyiv region – grains [4, 11, 12].

One might assume that received relatively large amount of positive results of skin prick-testing with composites' allergens comparing to trees' and grains' allergens is connected to the fact that allergens of the first ones are the most widespread and aggressive in our region. It is also proved by that the majority of patients with severe clinical progression revealed positive skin prick-testing results with composites' aeroallergens comparing to the patients with moderate to severe clinical progression (Pic.1). Number of pollen allergens, before which the results had been positive, also proves the complexity. Among the patients with severe clinical progression this number was estimated in 5±0,17 and appeared to be credibly higher (p≤0,01) than among the patients with moderate to severe clinical progression (2,7±0,08).

**CONCLUSIONS**

1. For Kherson region the third wave of pollen formation is the most typical and clinically hard (August-September period) – almost all patients examined reveal exacerbation during the indicated period and positive results of skin prick-testing with plants-allergens producing pollen in this time period.
2. The most widespread causatively relevant aeroallergens in Kherson region in patients with pollinosis according to the data of specific allergologic research proved to be allergens of composites (69,76 %), among which the most frequent is sensibility to pollen of Ambrosia, Helianthus, Artemisia and Cyclachaena.
3. The second place is taken by aeroallergens of wild and cultivated grains (28,23 %), among which the most frequent is sensibility to pollen of Lolium perenne, Festuca pratensis, Dactylis glomerata.
4. The complexity of clinical progression in patients afflicted with pollinosis is caused by number of pollen allergens sensibility proved (difference is credibly higher in patients with severe clinical progression comparing to moderate to severe one (p≤0,01)).
5. The subject of spectrum of causatively relevant aeroallergens investigation and analysis of southern Ukraine, particularly Kherson region, claims further research. The result that is to be expected is pollinosis diagnostics and treatment optimization and prevention of food sensibility development in such patients considering regional peculiarities of pollen formation in plants-allergens.

**REFERENCES**


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Conflict of interest:
The Authors declare no conflict of interest.

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