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SENSITIZATION TO A NEW INVASIVE ASTERACEAE FAMILY PLANT SPECIES IN BELARUS

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Introduction: In Belarus new invasive species, which can cause pollen allergy, are appearing, particularly Canadian goldenrod from the Asteraceae family.

Methods: A native extract of goldenrod pollen was obtained using the water-salt extraction method. To detect IgE antibodies to goldenrod, ELISA was used, where the extract of goldenrod pollen was used as an antigen. The study materials included serum of patients divided into three groups: Group 1: patients with proven allergy to plant pollen (n=91); Group 2: patients with verified allergy, without sensitization to plant pollen (n=10), and Group 3: patients with verified absence of allergy (n=14). All groups were comparable in age and gender.

Results: In Group 1, 12 patients (13.3%) were found to have IgE antibodies to the Canadian goldenrod; nine of twelve had previously been verified to have sensitization to the Asteraceae family, while three others had previously been verified to have polysensitization to different groups of respiratory allergens (pollen and mite). Among patients of this group, 29 had previously been diagnosed with sensitization to Asteraceae, and 9 (31%) were found to have specific IgE antibodies to Goldenrod. In the second and third groups, IgE to goldenrod was not detected.

Conclusion: The spectrum of pollen sensitization in Belarus is now expanded due to the new invasive species, Canadian goldenrod. Obtaining extracts of pollen of regional invasive species expands the ability to perform assessments of local in vitro pollen sensitization diagnostics.