

HYPERSENSITIVITY TO THE POLLEN OF *OLEA EUROPEA* IN THE MEDITERRANEAN AREA

Nataša SKITARELIĆ and Neven SKITARELIĆ

Zadar General Hospital, Zadar, Croatia

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Olive pollen is one of the most important causes of inhalant allergy in the Mediterranean countries (1, 2). We investigated the frequency of hypersensitivity to the pollen of *Olea europea* in pollen allergic patients in Dalmatia, Croatia (3). A total of 810 patients with pollen allergy, were examined: 469 (58 %) male and 341 (42 %) female, age range from 4 to 53 years.

The patients were assessed on the basis of medical history, clinical examination, measurement of pulmonary function (adults and children older than 7 years), intradermal prick test, and immuno-enzyme UniCAP test (UniCAP, Fluoroenzymeimmunoassay; Pharmacia, Upjohn, Sweden) for specific IgE antibodies. We used standard allergen prick tests produced by the Institute of Immunology in Zagreb, Croatia.

Our study, like two earlier (4, 5), confirmed that grasses, especially *Parietaria officinalis*, are the main pollen allergens. Trees rarely cause allergies in the Croatian part of the Adriatic coast (4). Hypersensitivity to *Olea europea* occurred in 66 of 810 (8.15 %) assessed patients with pollen allergy. *Olea europea* and *Fraxinus ornus* belong to the family of Oleaceae. Both trees are part of the local flora. We confirmed the hypersensitivity to *Olea europea* allergen and excluded cross-reactivity between these plants by specific IgE antibodies measurements.

The most prevalent clinical manifestations were rhinitis in 39 (59 %) of 66 patients allergic to *Olea*

europea pollen and bronchial asthma in 20 (30.3 %) patients. It is interesting to note that 51 patients (77 %) lived in towns and the rest in villages; only 3 patients (4 %) lived on the islands. The prevalence of pollen allergies in patients living in the coastal region is recognised in other Mediterranean countries (6).

The hypersensitivity to *Olea europea* allergen in our patients was significantly lower than in other Mediterranean countries (Figure 1); ($p < 0.01$), where varied from 21 % to 31.8 % (7-10). The reason for this difference may be sought in greater industrial pollution (11, 12) and greater area cultivated with olives (13) in other Mediterranean countries.

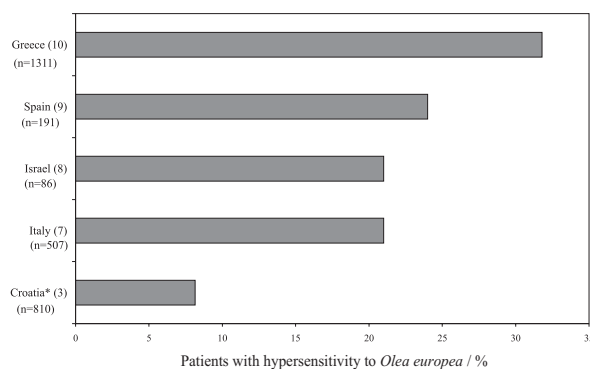


Figure 1 Hypersensitivity to the pollen of *Olea europea* in five Mediterranean countries, * $p < 0.01$.

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CORRESPONDING AUTHOR:

Nataša Skitarelić, MD
Put Murvice 33
23000 Zadar, Croatia
E-mail: neven.skitarelic@zd.t-com.hr