

## Hypersensitivity to the pollen of *Olea europea* in Zadar County

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**Introduction:** Olive pollen is one of the most important causes of inhalant allergy in the Mediterranean countries.<sup>1</sup> We investigated the frequency of hypersensitivity to the pollen of *Olea europea* in pollen allergic patients in Dalmatia, Croatia.

**Patients and methods:** 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 ( $\geq 3$  mm), and immuno-enzyme UniCAP test for specific IgE antibodies. We used standard allergen prick tests produced by the Institute of Immunology in Zagreb, Croatia.

**Results:** Our study confirmed that weeds and grasses, especially *Parietaria officinalis* and *Dactylis glomerata*, are the main pollen allergens. Trees rarely cause allergies in the Croatian part of the Adriatic coast.<sup>2</sup> 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 recognized in other Mediterranean countries.<sup>3</sup>

**Conclusion:** Hypersensitivity to *Olea europea* allergen in our patients was significantly lower than in other Mediterranean countries ( $p < 0.01$ ) where it varied from 21% to 31.8%.<sup>4-7</sup> The reason for this difference may be sought in greater industrial pollution and greater areas cultivated with olives in other Mediterranean countries.

**Key words:** hypersensitivity, Olea Europea, Zadar County

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