



## 7. HYPEREOSINOPHILIC SYNDROME - DIAGNOSTIC CHALLENGES IN ALLERGIC PATIENTS

**Author:** Chiosa Mihaela

**Scientific advisor:** Brocovschi Victoria, MD, PhD, Associate Professor, Pneumology and Allergology Discipline, Department of Internal Medicine, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction.** Eosinophilia is a common laboratory manifestation associated with multiple diseases (allergic, parasitic, infectious or oncological diseases). Eosinophilia is an increase in the absolute values of eosinophils in peripheral blood, bone marrow or other tissues above normal limits (350-500 cells/ $\mu$ l). The severity of eosinophilia is classified as mild (500-1500/ $\mu$ l), moderate (1500-5000/ $\mu$ l) or severe (>5000/ $\mu$ l).

**Case statement.** We present the clinical case of a 32-year-old female, with severe hypereosinophilia (5000-9000/ $\mu$ l) persistent for 2 years, with reversible bronchoconstrictive syndrome, manifestations of chronic urticaria. Diagnosed with moderate persistent uncontrolled allergic asthma and chronic urticaria. Multiple food allergies (cow's milk protein, egg, latex, raspberry), latex-food syndrome. Total IgE values range from 1000-3200 IU/ml. Parasitic invasion assessment confirmed the presence of *Ascaris lumbricoides* and *Toxocara canis*. Serum hypereosinophilia (36-57%) in the last 2 years was mainly attributed to allergic diseases, the presence of symptoms on exposure and elevated specific IgE values to multiple food and inhalant allergens (cow's milk casein and lactalbumin, ovomucoid and ovalbumin, serum albumin, latex, banana, kiwi, pollens, mites). Eosinophilic bronchoalveolar lavage (69% eosinophils) and persistent elevated serum values (>5000/ $\mu$ l) required differential diagnosis with eosinophilic myeloproliferative syndrome, chronic eosinophilic leukemia was confirmed by bone marrow aspiration.

**Discussions.** Increased serum eosinophil values >1500 cells/ $\mu$ l for more than 6 consecutive months require consideration of hypereosinophilic syndrome (HES), which is characterized by a heterogeneous group of rare disorders characterized by significant blood eosinophilia (>1500/ $\mu$ l) without an underlying cause and with important clinical features caused by eosinophilic infiltration of tissues and organs.

**Conclusion.** Patients with hypereosinophilia most commonly present with allergic or parasitic diseases. An eosinophil count in the blood >1500/ $\mu$ l or higher that lasts over time should require a differential diagnosis with myeloproliferative malignant diseases.