

**Abstract:**

Hymenoptera venom allergy threatens the patients with severe, often life threatening anaphylactic sting reaction. Proper diagnostics and treatment are therefore crucial for the patient with this diagnosis and should be performed by an experienced allergist. We aimed to provide a comprehensive look at these patients, from the epidemiological, diagnostic and therapeutic point of view. Initially, we focused on predictors of severe systemic sting reactions. Then we followed by evaluation of the utility of available laboratory diagnostic methods and by monitoring of immunological parameters during venom immunotherapy. We met all these goals. We detected higher age, sting localization in the head region and male gender as predictors of severe systemic sting reaction. We also evaluated the clinical utility of all diagnostics methods, and we even suggested the possible way, how to optimize the diagnostic procedure in patients with Hymenoptera venom allergy. We noticed significant changes in immunological parameters during venom immunotherapy. Due to a low number of stings during treatment, we have not been able to evaluate the clinical relevance of these changes yet.