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## "Omalizumab combined with venom immunotherapy- experience of our department"

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### Abstract

**Background:** Allergy in Hymenoptera venom counts in the first three causes of anaphylactic reaction, some of these cases are classified as severe or near fatal. Immunotherapy is a well established way of treatment for hymenoptera venom allergy, although adverse reactions may also occur during this procedure. A few studies and case reports support the role of omalizumab pretreatment for difficult-to-treat cases.

**Objective:** The aim was to present the clinical experience of our Allergology Department retrospectively in patients with severe anaphylactic reactions after Hymenoptera sting. Omalizumab seems to play a critical role in some these cases.

**Method:** We review patients with type I hypersensitivity reaction to Honey bee and/or Wasp. Over 600 patients, with hymenoptera sting allergy, have been treated in our department. The use of omalizumab was needed in seventeen of them. Two were the main reasons for this option. Either, it was unable to reach the maintenance dose due to consecutive allergic reactions, or they presented anaphylaxis even treated in high maintenance dose (3ml).

**Results:** For all cases the eliciting factor was Honey bee venom. As it was expected, most of the patients were male. Unfortunately, only 5/18 had molecular blood testing performed, as it is quite recently broadly used. Also, 2/18 had elevated tryptase levels at baseline. The most common maintenance treatment was omalizumab in combination with 2ml of immunotherapy. Three of them stopped omalizumab treatment after a successful challenge test, and continue with immunotherapy as per protocol.

**Conclusions:** The majority of the patients needed omalizumab were allergic to Honey bee venom. Most of these reactions were grade IV according to Muller classification. None of these patients had the diagnosis of mastocytosis.