Specific immunotherapy in honeybee venom allergy: a comparative study using aqueous and aluminium hydroxide adsorbed preparations.

Abstract:
BACKGROUND: For the immunotherapy of Hymenoptera venom allergy various preparations and treatment protocols are in use. However, controlled studies making direct comparisons of the efficacy and safety of different regimens are rare.

OBJECTIVE: To assess prospectively different venom immunotherapy (VIT) protocols using an aqueous or an aluminium hydroxide adsorbed allergen preparation for the treatment of honeybee venom (HBV) allergy.

METHODS: Sixty-five HBV allergic patients (42 males, 23 females; aged 17-75 years) with a history of systemic anaphylactic reactions (SARs) to honeybee stings were treated according to three different regimens. During the incremental phase, patients in group A (n = 21) or B (n = 21) received an aqueous preparation according to a rush protocol. Patients in group C (n = 23) were treated with conventional ("slow") VIT using an aluminium hydroxide adsorbed depot preparation. The maintenance dose was 100 microg venom in all groups. Maintenance treatment in group A was performed with the aqueous preparation administered every 4 weeks, whereas in groups B and C the depot preparation was administered every 8 weeks (group B) or every 4 weeks (group C). A sting challenge test with a living honeybee was performed in 49 patients, 6-12 months after reaching the maintenance dose. Another seven patients were stung accidentally by a honeybee ("field..."
RESULTS: Treatment with the aqueous preparation evoked large local reactions more frequently than the depot preparation in the dose increase phase [53/693 (7.6%) vs 8/206 (3.9%); P = 0.059] and also in the course of maintenance therapy [85/172 (49.4%) vs 58/478 (12.1%); P< 0.001]. During the dose increase phase, systemic side-effects seemed to occur more frequently in patients on rush VIT with the aqueous preparation compared to patients initially treated with the conventional schedule using the depot preparation [13/42 (31.0%) vs 3/23 (13.0%); not significant). When re-stung by the culprit insect, SARs were observed in 3/20 patients (15.0%) in group A, 2/18 (11.1%) in group B and 3/18 (16.7%) in group C (not significant). CONCLUSIONS: The aluminium hydroxide adsorbed HBV preparation caused fewer large local reactions than the aqueous preparation. The therapeutic efficacy of the three treatment protocols did not differ.