**Background:** The common diagnostics methods for honeybee venom allergy are skin prick test and examination of specific IgE antibodies. The additional methods are sting challenge or basophil activation test (BAT), these methods could be useful for diagnosis honeybee venom allergy in individual patients. The sting challenge can be ethically problematic.

**Method:** We examined patients with honeybee venom allergy symptoms (II-IV grade according to Müller). The skin prick test was performed with standardized allergen (100µg/ml) and specific IgE antibodies to honeybee venom by means of CAP method. The expression of CD63 on peripheral basophils (BAT) after honeybee venom exposure (1µg/ml) was assessed.

**Results:** Skin prick test was positive in 60% patients and non-evaluated (dermatographism) in 6% patients. Specific IgE positivity to honeybee venom was found in 94% patients. We detected expression of CD63 on peripheral basophils (BAT) by flow cytometry in 94% patients.

**Conclusion:** We suppose, that BAT could be useful for diagnosis honeybee venom allergy in individual patients. We use BAT in patients with dermatographism, by contraindication of skin prick tests and by patients with negative skin prick test, who have honeybee venom allergy symptoms.