

## 論 文 要 旨

## Basophil Activation Test based on CD203c Expression in the Diagnosis of Fish Allergy

〔 魚アレルギーの診断における CD203c 発現測定による好塩基球活性化試験 〕

今給黎 亮

**Purpose:** The basophil activation test (BAT) has been reported to be useful for the diagnosis of various food allergies, such as allergy to peanut, but not to fish. This study aimed to evaluate the diagnostic performance of the BAT for fish allergy.

**Methods:** We performed a retrospective review of patients with fish allergy who underwent the BAT using a panel of fish extracts (15 kinds) to examine the differential reactivity to several species of fish. The BAT score for each extract was expressed as the ratio of CD203c<sup>high</sup>% with the extract to that with anti-IgE antibody. Clinical reactivity to each fish was confirmed by positive oral food challenge or a typical history of fish-induced immediate allergy symptoms. Receiver-operating-characteristic (ROC) analysis was performed to evaluate the diagnostic performance.

**Results:** Fifty-one patients with fish allergy were analyzed. Using extracts of 15 species of fish, the BAT was performed a total of 184 times on the patients. Clinical allergy to each species of fish was confirmed in 90 (48.9%) of those tests. ROC analysis yielded high areas under the curve for the BAT scores for the 5 most common fish species (0.72–0.88). The diagnostic accuracy ranged from 0.74 to 0.86. Using a tentative cutoff value of 0.3 deduced from the ROC analyses of the 5 fish species, the accuracy for other fish allergic reactions was generally high (0.6–1.0), except the fish tested in a small number of patients.

**Conclusions:** The BAT score based on CD203c expression may be useful for fish allergy diagnosis, especially since a large variety of fish can be tested by the BAT using fish extracts prepared by a simple method.

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