

## DIAGNOSIS OF BETALACTAM IMMEDIATE REACTIONS

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**Introduction:** Betalactam allergy is one of the most frequent reasons for consultation to allergy departments.

**Objective:** To evaluate the sensitivity of specific IgE levels for betalactam allergy diagnosis.

**Material and Methods:** 68 patients with confirmed allergy to betalactams (31 side chain/10 betalactam ring), and 63 controls with confirmed tolerance to these antibiotics were included. The allergy evaluation results were collected: betalactam skin tests (prick/ID), total and specific IgE >0.35 kUA/L (ImmunoCAP™, Thermo Fisher Scientific), drug provocation test (DPT), and basophil activation test (BAT) (Basotest™, Celonic). Results were compared with the ones obtained when decreasing specific IgE cut point (>0.10 kUA/L)

**Results:** 37 women and 31 men (25-82 years old; total IgE 2.25-7,686 kUA/L) with previous betalactam immediate reactions (1 week-12 months before; mean 12 weeks) were collected. Diagnosis was established by skin test positivity: 58 cases (85.29%), or BAT 4 (5.88%), or specific IgE  $\geq$ 0.35 kUA/L 3 (4.41%), or DPT 3 (4.41%).

The controls (42 women; 21-83 years old; total IgE 2-74 kUA/L) did not have positive results for skin tests or specific IgE >0.10 kUA/L.

BETALACTAM	$\geq$ 0.35 kUA/L	$\geq$ 0.10 kUA/L
Peniciloil G	7 (10%)	10 (15%)
Peniciloil V	10 (15%)	14 (20%)
Ampicillin	8 (12%)	13 (19%)
Amoxicillin	13 (19%)	24 (35%)
Cefaclor	4 (6%)	12 (18%)

**Conclusions:** Skin tests continue to be the most sensitive and specific method for betalactam allergy diagnosis. The sensitivity of betalactam specific IgE is low, but it improves noticeably when decreasing the cut-off point to 0.10 kUA/L.



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