

Sodium benzoate: positive patch test coexisting with positive single-blinded placebo-controlled oral food challenge in the patient with urticaria.

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Introduction

Sodium benzoate (SB), widely used preservative, may cause hypersensitivity reactions when ingested orally or induce contact allergy.

Aim

To check frequency of SB hypersensitivity in patients with urticaria and a suspicion of hypersensitivity to food additives.

Material and methods

Patients with urticaria and suspicion of hypersensitivity to food additives hospitalized at the Department of Allergology of the Medical University of Gdansk, Poland (2017–2019) were enrolled into the study. All the patients underwent patch test with 5% sodium benzoate. Based on the questionnaire selected patients with possible SB hypersensitivity were qualified into a single blind placebo-controlled oral challenge (OC) according to the protocol: placebo/250/500 mg capsules were given at 2 h intervals.

Results

Out of 18 OC performed one was positive. A 66-year-old woman suffered from chronic urticaria, angioedema and eczema from two years with exacerbations reported only after consuming processed foods. Eruptions appeared on the face, thorax and forearms and resolved within 24 h after ingestion of 20 mg of bilastine.

The patient was treated for asthma, seasonal allergic rhinitis, hypothyroidism and gastrointestinal reflux. Autologous serum skin test was negative. The only positive SB patch test out of 110 patients tested in the study was positive in the given patient on days D2–D6. Thirty minutes after 250 mg of verum administration, the patient developed throat tightness, swelling of the upper lip and abdominal pain. No signs of obstruction was found in spirometry. Currently, the patient follows a strict diet with no processed products, achieving a significant remission of symptoms.

Conclusions

Sodium benzoate positive patch test can coexist with hypersensitivity after oral intake.

The authors declare no conflict of interest.