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IgE-mediated hypersensitivity to chlorhexidine among first-year dental students (Article)

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Abstract

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Purpose: To investigate immunoglobulin E (IgE)-mediated hypersensitivity to chlorhexidine (CHX), and association between CHX exposure and serum specific IgE (SIgE) levels, among first-year dental students. **Methods:** Participants completed a questionnaire on medical health, history of allergies/hypersensitivities and CHX exposure. A sample of venous blood (3 mL) was drawn and subjected to SIgE test to CHX; sensitisation defined as SIgE level of ≥ 0.10 kU_A/L. **Results:** Fifty-eight (98.3%) participants, consisting of 69% (n = 40) female with a mean age of 21, were recruited; three quarters (84%) reported no known health issue, and over half had no history of allergies (57%); less than 20% reported having had exposure to CHX-containing products with the majority from toothpaste (9%) and mouthwash (12%). The CHX SIgE test showed that 8.6% (n = 5) were sensitised. No association between CHX exposure history and the level of SIgE antibody was noted. **Conclusions:** Although most participants reported no known exposure to CHX, 8.6% showed CHX sensitisation suggesting unknown exposure and the potential risk of developing hypersensitivity and adverse reactions in the future. © 2019, Springer Medizin Verlag GmbH, ein Teil von Springer Nature.

SciVal Topic Prominence ⓘ

Topic: Anaphylaxis | Hypersensitivity | Perioperative anaphylaxis

Prominence percentile: 88.735 ⓘ

Author keywords

IgE-mediated ImmunoCAP test Occupational health Sensitisation Serum specific

Indexed keywords

EMTREE drug terms: chlorhexidine hand sanitizer immunoglobulin E mouthwash toothpaste

EMTREE medical terms: adult allergic rhinitis allergy Article bioassay dental student drug exposure female fluoroimmunoassay food allergy glucose 6 phosphate dehydrogenase deficiency health service human hypersensitivity major clinical study male mouth hygiene questionnaire sensitization seroprevalence systemic lupus erythematosus venous blood young adult

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Chemicals and CAS Registry Numbers:

chlorhexidine, 3697-42-5, 55-56-1; immunoglobulin E, 37341-29-0

Device tradename:

ImmunoCAP, Thermo, Sweden

Manufacturers:

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Thermo, Sweden

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