Suspected patch testing with potassium alcohol 2.5%.

Tests with chlorhexidine twice were positive at 48 hours.

The dermatologist's test was positive as an antecubital before chlorhexidine twice 0.5% aqueous solution of chlorhexidine 0.5% was applied as the patch test 2 weeks after the procedure and spontaneous erythema, purpura, and lesions on the arm of the patient with history of allergy presented with flakes of potassium alcohol.

Patient 1: A 2-year-old boy with conjunctival hyperemia.

Figure 1: Excitatory vesicular lesion on the knee (Patient 1).

Figure 2: Positive test (upper) and negative test (lower) (Patient 1).

Possible diagnosis was a positive and negative result at the same site, including within 8 days. One week after the lesions resolved the patient presented a reaction and was read positive after a few hours. The result of the patch test was positive at 0.5% potassium alcohol 0.5% was negative, and in the other an essential at 5% and Z% were negative, and in the other an essential at 96 hours. The result of the patch test with chlorhexidine 0.5% was positive with chlorhexidine 0.5%.

Commentary. Chlorhexidine (chlorohexidine 0.5% in petrolatum) and the ethyl 4% component of chlorhexidine (chlorohexidine 0.5% in petrolatum) caused an allergic reaction. Likewise, the patient's lesions developed with the exposure of chlorhexidine 0.5% of any product at the beach and no previous application.

Patient 2: A 76-year-old female with no history of allergy to chlorhexidine.

Figure 3: Positive test (upper) and no reaction (lower) (Patient 2).

To the Editor:

Allergic Contact Dermatitis Due to Chlorhexidine in 2 Patients

Allergic Contact Dermatitis Due to Chlorhexidine in 2 Pediatric Patients

Figure 4: Positive test (upper) and no reaction (lower) (Patients 3 and 4).

Pediatric case report: A 5-year-old girl with no history of allergy to chlorhexidine.
and 10% in water and chlorhexidine 0.5% in water yielded positive results to chlorhexidine at 48 and 96 hours. When antiseptic with chlorhexidine was suspended, the patient did not develop further lesions. The parents decided not to continue with the study.

Chlorhexidine is a topical fungicidal and bacterial antiseptic that has been widely used in health care since 1954, generally in the form of digluconate, aqueous solutions, or alcohol-based solutions. It is used for hand washing, hygiene of hospitalized patients, presurgical antiseptic baths, and disinfection of the surgical area. It is also applied before placement and care of catheters and may be used to impregnate medical devices (eg, cannulas, dressings, catheters). Furthermore, in recent years, chlorhexidine has been increasingly used as a biocide in all types of cosmetic products.

Chlorhexidine can lead to local irritation. Other adverse effects, such as tooth discoloration and fixed drug eruption, are less common. In addition, chlorhexidine can potentially cause allergic contact dermatitis, photosensitization, urticaria, and anaphylaxis. Some patients experience both immediate and delayed hypersensitivity reactions; therefore, even mild to moderate allergic dermatitis may indicate a potential risk of severe immediate-type reactions during subsequent exposure to chlorhexidine in this population.

However, the sensitizing capacity of chlorhexidine is poor despite the frequency of its use. Series of patients assessed using patch tests show that between 0.5% and 13.1% are sensitized to chlorhexidine, although in Europe, 1% is a more realistic prevalence. The appropriate concentration for testing chlorhexidine has not been established. A concentration of 0.5% is probably more appropriate than 1%, since it leads to fewer irritant reactions.

We report the cases of 2 children with allergic contact dermatitis to chlorhexidine, in 1 of whom sensitization was shown to be immediate. In patients with a positive patch test result to chlorhexidine, the workup should be completed with skin tests in order to assess the possibility of immediate-type allergic reaction. Furthermore, in the case of a patient with urticaria or anaphylaxis during medical or dental treatments, chlorhexidine should be considered a possible trigger, alongside latex, anesthetics, and other drugs.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

References


S. Córdoba, a T. Sanz-Sánchez, b E. Mohedano-Vicente, c J. Borbajo a

a Servicio de Dermatología, Hospital Universitario de Fuenlabrada, Madrid, España
b Servicio de Dermatología, Hospital Universitario Infanta Sofía, San Sebastián de los Reyes, Madrid, España
c Servicio de Alergía, Hospital Universitario de Fuenlabrada, Madrid, España

Corresponding author.
E-mail address: scordoba.hflr@salud.madrid.org (S. Córdoba).

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