Anaphylactic shock after contact with a betaine-polyhexanide antiseptic solution

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Background: Prontosan® is an irrigation solution indicated for cleansing, moisturising and decontamination of acute and chronic wounds, and contains 0.1% undecylenamidopropyl betaine plus 0.1% polyaminopropyl biguanide (polyhexanide [PHMB]) in purified water.

Report: We report the case of a 72-year-old woman, non-atopic, that developed manifestations of an anaphylactic shock, with generalized urticaria, stridor, dyspnoea, nausea, abdominal pain and severe hypotension in about 20 minutes after nurse treatment of a chronic vascular ulcer with Prontosan® and petrolatum, at primary care; she was immediately medicated with hydrocortisone but no adrenaline and was transferred to the hospital emergency. The ulcer has been treated with the same antiseptic compound twice weekly before the described severe reaction although in the two previous treatments she presented with generalized urticaria, stridor and dyspnoea in 30 minutes after the ulcer care. Following the episode of anaphylactic shock, treatment did no longer include Prontosan®, and no more reactions occurred after that. The patient was referred to an Allergist for evaluation. A skin prick test with the implicated antiseptic was performed inducing a 6x5 mm wheal at 15-minute reading (identical to histamine 10mg/ml); however, at 30 minutes a significant wheal increase was observed, to 14x10 mm. The patient’s daughter offered to be a control with a negative skin test result. At this point it was not possible to test each antiseptic component separately, but this will be the next step, along with an in vitro assay.

Clinical Relevance of Report: To the authors’ best knowledge this would be the forth case of anaphylaxis to a polyhexanide irrigation solution. No reports of severe immediate hypersensitivity reactions to topical betaine formulations were found in the literature.

Statement of Consent for Presentation and Publication: The authors state they have obtained patient’s informed oral consent for presentation and publication of the present clinical case.