

Images in Allergy

Allergic Contact Dermatitis after Injection of Local Anesthetic

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A 57-year-old woman presented with a history of 2 separate events of severe inflammatory skin reactions after surgical procedures. Recently, 24 hours after an ambulatory phlebectomy, she developed a pruritic and painful bullous erythema at the surgical site, without fever, chills, or fatigue (Figure 1, A, with wound closure strips). Both the recent and former surgical procedures had been performed using tumescent local anesthesia with 220 mL diluted Xylonest, containing prilocaine (20 mL Xylonest 1% + 200 mL sodium chloride solution). Tumescent local anesthesia uses large volumes of dilute anesthesia fluid that produces swelling and firmness (tumescence).

Extensive patch testing using the baseline series and additional series of the German Contact Dermatitis Research Group displayed no relevant positive reaction. This included patch testing with acrylates, parabens, skin disinfectants, and local anesthetics (cinchocaine, tetracaine, lidocaine, procaine, benzocaine). Prilocaine is not included in the German patch test series “local

anesthetics.” The intradermal skin test with 1% prilocaine without additives at a volume of 0.03 mL revealed a positive test result after 24 hours (Figure 1, B), thus corroborating our diagnosis of an allergic contact dermatitis caused by this compound. We also performed intradermal skin tests with mepivacaine 1%, lidocaine 1%, bupivacaine 0.5%, and ropivacaine 0.5% with negative results (each test volume 0.03 mL). Subsequent challenge tests with subcutaneous mepivacaine injections were well tolerated to rule out cross-reactivity with closely related local anesthetics.

The unusual clinical presentation of allergic contact dermatitis caused by prilocaine was probably augmented by the technique of tumescence anesthesia, using large volumes of local anesthetics. In general, contact dermatitis by local anesthetics is a rare condition and mostly caused by benzocaine.¹ However, severe contact dermatitis may be mistakenly diagnosed as erysipelas, and this important differential diagnosis needs to be ruled out in a case like this. Furthermore, we highly recommend a

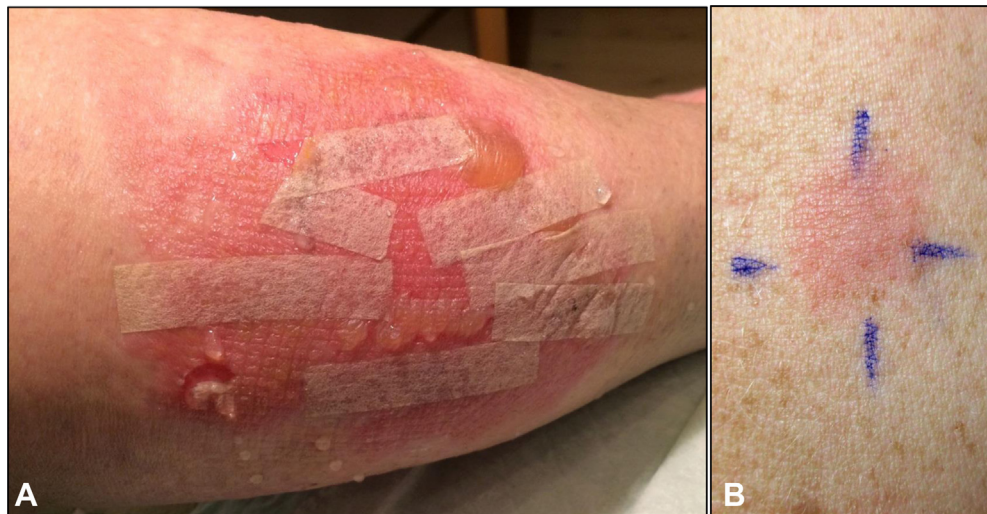


FIGURE 1. A, Pruritic and painful bullous erythema at the surgical site of a phlebectomy after 24 hours. Wound closure strips were applied immediately after surgery. B, Intradermal skin test with prilocaine 1% without additives (volume of 0.03 mL) resulted in a palpable erythema after 24 hours that persisted for several days. All other tested local anesthetics by the patch test or intradermal skin test remained negative.

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comprehensive allergy workup in contact dermatitis to local anesthetics including challenge tests with safe alternatives to rule out cross-reactivity to related compounds.

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