

Images in Allergy

Biphasic Blue Urticaria

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A 59-year-old woman with essential hypertension, anxiety, hypothyroidism, and stage I breast cancer underwent breast-conserving surgery with sentinel lymph node biopsy. Approximately 45 minutes after injection of Patent Blue V, she developed a slightly blue urticarial exanthem surrounding the breast, which spread to the dorsal region. Hypotension, hypoxia, and hypercapnia were not observed. Intravenous hydrocortisone, clemastine, and ranitidine were administered, with only slight improvement. After reversal of neuromuscular blockade and extubation, there was severe respiratory distress and 1 mg subcutaneous epinephrine was administered, followed by reintubation. Around 90 minutes later, the exanthem generalized, acquiring a bluish hue (Figure 1) and periorbital angioedema appeared. Clemastine, hydrocortisone, and 0.5 mg intramuscular epinephrine were administered with progressive improvement allowing for extubation 3 hours later, without further complications. Acute tryptase level was elevated (64.4 ng/mL) and basal tryptase was normal (4.63 ng/mL). Skin

tests with all perioperatively administered drugs were performed 6 months later. Only Patent Blue V was positive on skin prick (25 mg/mL) and intradermal testing (0.25 mg/mL) (Figure 2), which confirmed it as the culprit drug.

Supravital dyes, such as isosulfan blue dye or Patent Blue V, are frequently used to guide sentinel lymph node biopsy, avoiding a blind axillary node clearance with potential for high morbidity. The prevalence of anaphylaxis due to these dyes is low and may reach 3% of perioperative anaphylaxis cases for Patent Blue V.¹ Biphasic blue urticaria is an unusual presentation of perioperative anaphylaxis that both allergists and anesthesiologists should be able to recognize and manage properly.

REFERENCE

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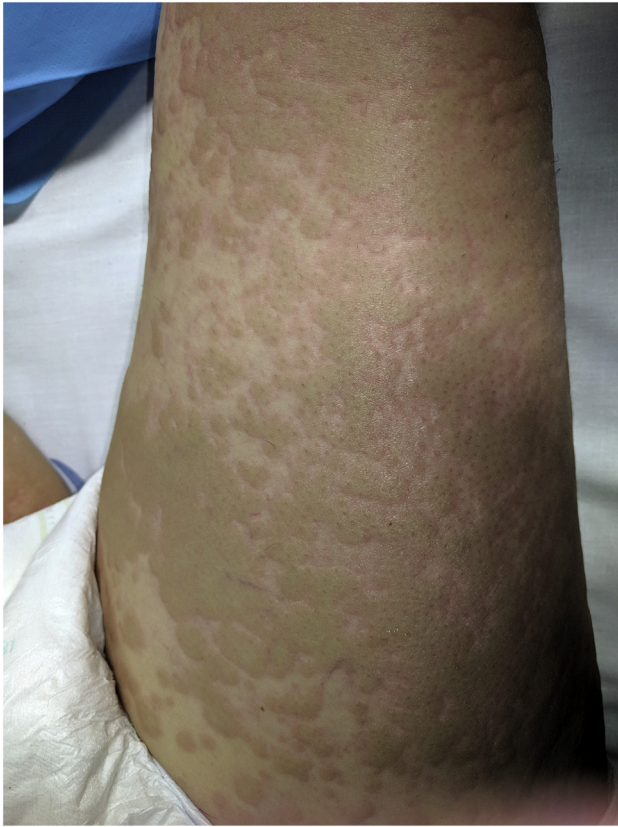


FIGURE 1. Blue urticaria after the injection of Patent Blue V.

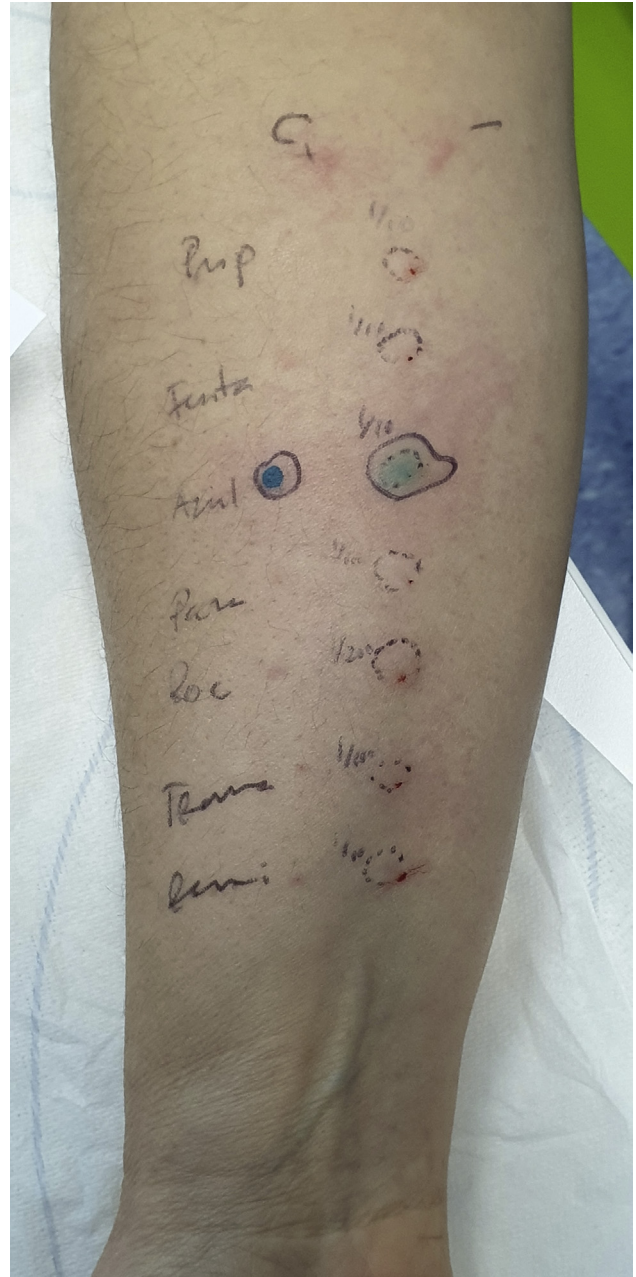


FIGURE 2. Skin testing with drugs used during surgery: skin prick tests on the left and intradermal tests on the right. The skin prick and intradermal tests were positive only for Patent Blue V.