
Correspondence

HEPARIN HYPERSENSITIVITY: A CASE OF MISTAKEN IDENTITY

To the Editor:

Hypersensitivity reactions during heparin treatment are not common. Systemic urticaria and even anaphylactic shock have been described.¹⁻⁶ These anaphylactic reactions are now very rare with improved heparin cleansing, with most reactions now attributed to preservatives.⁷⁻⁹ Recent reports suggest there may be a more likely chance of hypersensitivity reactions occurring with some direct thrombin inhibitors, such as lepirudin.¹⁰

A 59-year-old man was admitted to our hospital for a planned, semiurgent carotid endarterectomy the following morning. The patient was given a 5,000-U heparin bolus intravenously after admission and immediately developed lightheadedness, abdominal cramping, tachycardia, facial and neck flushing, diaphoresis, and hypertension (blood pressure, 220/120 mm Hg). His oxygenation remained normal per a pulse oximeter reading of 97%, and he denied any shortness of breath, wheezing, or urticaria. His signs and symptoms were self-resolved after 15 minutes. However, 45 minutes later he developed identical signs and symptoms, albeit milder, when his intravenous site was flushed. Again, he had self-resolution of the signs and symptoms. The patient had received heparin before these episodes without adverse reaction.

The allergy/immunology service was consulted for further evaluation of a possible anaphylactic response to the heparin. Recommendations for other alternative anticoagulant agents that might be used were also requested. Initial evaluation included measuring the serum tryptase level 90 minutes following the event and heparin skin testing.

The patient was evaluated in the surgical intensive care unit. On allergy examination, the patient had no signs or symptoms of his prior reaction associated with the heparin administration. Skin testing was performed with the following: histamine control, saline control, and full-strength heparin (5,000 U/mL). Skin testing revealed a 2+ histamine reaction and a negative reaction to the saline control and heparin.

As the consultation report was being written, one of the intensive care nurses remembered a recent event that had occurred in the intensive care unit. In this recent event, the heparin medication drawer had mistakenly been stocked with 1:1,000 epinephrine. Given this recent episode, a team was sent to the ward where the current patient had experienced his heparin-associated reaction. When the Sharps container was unlocked in the patient's prior room, an empty Tubex (Wyeth-Ayerst Laboratories, Collegeville, PA) of 1:1,000 epinephrine was found. The patient had unknowingly re-

ceived 1 mL of 1:1,000 epinephrine instead of the intended 5,000-U heparin bolus.

Hypersensitivity reactions to heparin have rarely been described in the literature. In a clinical situation like the one described herein, inappropriate administration of epinephrine must be considered in the differential. In this case, the similarity of the heparin and epinephrine Tubex resulted in an administration error (Figs 1 and 2). A similar potential error could result in the setting of an anaphylactic event in which heparin could mistakenly be administered instead of epinephrine. Clinicians should be alert to each of these potential errors. In light of the potential for future serious complica-

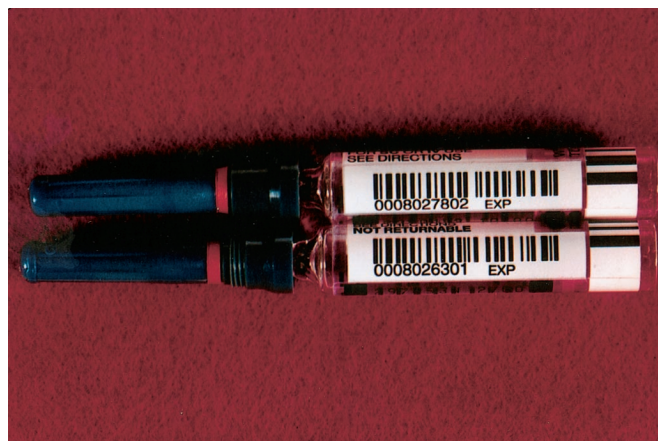


Figure 1. Two identical-appearing vials face down.



Figure 2. The same vials face up, with names of the 2 different medications clearly visible.

tions, such as the one described herein, Wyeth-Ayerst has since discontinued their Tubex system.

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