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Anaphylactic Reaction to Intravenous Nitroglycerin

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Introduction: There have been few previously reported cases of reactions to forms of nitroglycerin other than transdermal. There has been a reported case of an allergic reaction to the IV form of nitroglycerin without anaphylaxis. Nitroglycerin is frequently used as a cardiac preload and afterload reduction agent. Adverse affects associated with nitroglycerine include diaphoresis, facial flushing, hypotension, tachycardia, lightheadness, syncope, nausea and emesis. To our knowledge, this is the first reported case of anaphylaxis to IV nitroglycerin.

Case Report:
69 year old female was transported to the ED by ambulance with the complaint of chest pain. In route the patient received three doses of sublingual nitroglycerin. Upon arrival at the ED the patient received IV nitroglycerin. Within an hour of receiving the IV infusion the patient was noted to have raised, pruritic, blanching, erythematous urticarial lesions on the extensor surface of the mid left arm. IV Benadryl 12.5mg and solumedrol 80mg IV were each administered once on the day of admission. The patient reported hives spread all over her body and that benadryl and solumderol improved the pruritis. Within less than 24 hours after receiving IV nitroglycerin, the patient developed non-pruritic edema of her upper lip that was associated with numbness of the upper lip and hoarseness of her voice. The patient denied feeling lightheaded, throat swelling, shortness of breath, emesis, or diarrhea. Vital signs remained stable. Allergy and Immunology were consulted following the anaphylactic reaction to IV nitroglycerin. The patient had a past history of a cutaneous pruritic reaction to tetracycline and feeling faint after taking macrodantin. The patient's other medications at the time of admission included aspirin, omeprazole, metoprolol, simvastatin, budesonide, ibandronate sodium, calcium carbonate and lactase.

Results: The patient was started on hydroxyzine 25mg by mouth three times per day. The urticarial rash resolved within 4-5 days. The patient was to follow up with the Allergy/Immunology Clinic.

Conclusion: Allergic responses to forms of nitroglycerine excluding transdermal seldomly occur. Due to the patients finding of upper lip edema, numbness, and hoarse voice, it can be concluded that the patient experienced an anaphylactic reaction to the IV nitroglycerin. To our knowledge, this is the first reported case of anaphylaxis to the IV form of nitroglycerin.