



Hyperbaric oxygen treatments for vasculitis induced by levamisole-containing cocaine



J. Ptak, S. Reetz, J. Buckey

Center for Hyperbaric Medicine at Dartmouth-Hitchcock Medical Center, Lebanon, NH
Geisel School of Medicine at Dartmouth, Lebanon, NH

Background

- Levamisole was originally marketed as an antihelminthic drug. It was found to have major immunomodulatory properties and was used to treat a variety of other conditions. In 2000 the FDA banned its use in humans due to adverse side effects.
- Levamisole produces a characteristic vasculitis.
- For over a decade cases of the characteristic cutaneous lesions from levamisole have been seen in cocaine users.
- It is likely that 70% of the cocaine in the United States may be mixed with levamisole, which is not detected with the commonly used street test for purity. Levamisole is added to increase the weight of the cocaine and may increase the stimulant effects of cocaine.

Case report

We were asked to evaluate a 44 yo woman with a history of cocaine abuse who had been admitted 2 days earlier with a 2-day history of rapidly spreading, painful ecchymoses that developed into bullae, which subsequently ruptured. The patient had been using cocaine and the dermatology service diagnosed levamisole-induced vasculitis. Since ischemia was felt to be a significant component of these lesions, she was referred for Hyperbaric Oxygen treatments (HBOT) to help with healing. Of particular concern were the [auricles](#).

Methods

- Hyperbaric oxygen treatments were given at 2.4 ATA daily.
- Hyperbaric oxygen treatments were stopped after 10 treatments as it was felt the acute phase was over and there was no ongoing ischemia and necrosis.
- Pain control and wound drainage were major issues during treatments.
- Over the next 6 months the lesions healed. Debridement, plastic surgery, and ongoing wound care were required during this time.

Summary

- The introduction of HBOT early in the patient's course likely reduced tissue necrosis and reduced hospital stay time.
- HBOT may be a useful adjunct early in the course of levamisole-induced vasculitis.

Lesions

Lesions at the start of HBOT



Auricle at the start of HBOT



3 months later

