

# Case Study: The Use of Hydrofera Blue™ on a Chemical Burn by Cyhalothrin

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## **History of Present Illness/Injury:**

This 70 year old white male was spraying a product containing cyhalothrin (Hot Shot Home Insect Control) overhead to kill spiders. Some of the product dripped and came in contact with his skin in five locations on his upper right arm and hand. He states he washed his arm and hand with copious amounts of soap and water right after the contact of the product on his skin. He presented to the office for evaluation four days after the incidence complaining of burning pain, paresthesia and blistering at the sites. A colleague initially saw this patient and contacted poison control who provided information regarding the procedure for decontamination and monitoring. Prolonged exposure can cause symptoms similar to frostbite. Paresthesia related to dermal exposure is reported but there was no available guidance for treatment options for the blistered areas and/or treatment options for the paresthesia given. Washing the contact area with soap and water was indicated by the guidelines.

## **Past Medical History:**

This patient has a significant history of hypertension.

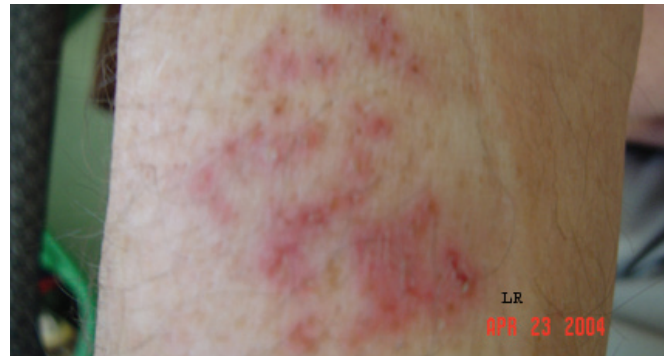
## **Medications/Allergies:**

This patient takes Norvasc 10mg daily. He has used Tylenol 1000mg every 4-6 hours as needed for pain without significant improvement in his pain level. He has no known allergies.

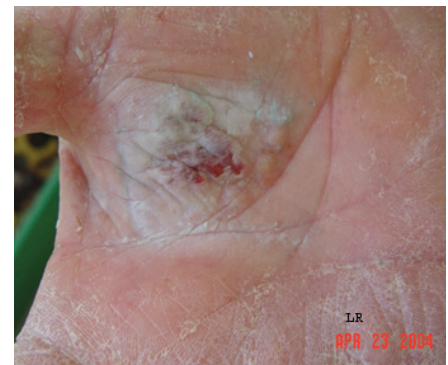
## **Treatments:**

**Day 4 (after exposure):** The patient presented for evaluation after a dermal chemical exposure complaining of burning pain, blisters and paresthesia. He had washed the area after exposure with soap and water and had applied a triple antibiotic ointment. During this evaluation poison control was contacted for guidance. The information received did not go into any detail for treatment of the skin unless symptoms of frostbite occurred. The patient was advised to put vitamin E oil onto all sites and keep covered to protect the blisters. He was also started on Augmentin 875mg orally twice a day for 10 days for a suspected cellulitis.

**Day 8 (after exposure):** The patient returned to the office complaining that the burning sensation and paresthesia in the hand have been interfering with his sleep. He had clusters of blisters, three areas on the upper right arm, a large blister cluster in the palm of his hand and a smaller blistered area on the right middle finger. There was noted erythema surrounding each blister cluster and the patient rated his pain in these areas a 10 out of 10 on the pain scale. He was able to move his arm but had some difficulty making a fist with his hand. Sensation was intact and somewhat hyper, pulses were equal bilaterally. There was no further available advice from poison control on the treatment for these blisters so I decided to place Hydrofera Blue™ and a film cover dressing on all the exposed sites. There was no evidence of infection or cellulitis at the sites therefore I had the patient stop the antibiotics.



**Day 11 (after exposure):** The patient returned for further evaluation; he stated that one hour after the placement of the Hydrofera Blue™ he had no further burning pain. The blisters on the upper extremity were resolved and there was epithelialization noted on all sites. The upper arm blisters were completely resolved after just three days of the Hydrofera Blue™ being placed. The palm continued to have active blisters however the patient was now able to make a fist and denied any further pain. There was some noted blue staining on the skin of the palm. Hydrofera Blue™ and a film dressing were continued on the palm, the patient was instructed on how to do the dressing change and advised to change the dressing every three days.



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**Day 26 (after exposure):** The final evaluation was made after the patient returned from his scheduled vacation. He stated that on day 17 after exposure (nine days after the placement of the Hydrofera Blue™) he had complete resolution of all blisters on his palm and had resumed all his normal activities. There was no scarring or residual blue coloration on the sites where Hydrofera Blue™ was used.