

Images in Infectious Diseases

Venom concentrations in blisters and hemorrhagic bullae in a patient bitten by a Taiwan habu (*Protophrops mucrosquamatus*)

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Except for limb swelling, blisters and hemorrhagic bullae may develop in more severe cases in Taiwan habu snakebite. Nevertheless, little is known about venom concentrations in these wounds.

A 66-year-old man was bitten on his right wrist by a Taiwan habu while cleaning his storage room. Four vials of antivenin were administered at a local hospital. Four hours later, blisters of various sizes and two hemorrhagic bullae developed on his palm and forearm (Figure A). Around 20 hours after the incident, fluid samples from the fang mark blister, another blister, one light-red hemorrhagic bulla, and one dark-red hemorrhagic bulla were aspirated and sent for ELISA testing; venom concentrations in the above samples were 74.4 ng/mL, 140.2 ng/mL, 209 ng/mL, and 209 ng/mL, respectively (Figure B). We removed a total 1109 ng of venom from this patient.

Venom in blisters indicate that they may function as venom depots to which antivenin has poor access and from which venom may be subsequently released. The subsequently released venom may lead to delayed poisoning effects and additional tissue damage.¹⁻³ Aspiration of bullae fluids to eliminate venom depots may be accepted for “decontamination” to prevent further envenomation and reduce tissue damage.

Conflict of Interest: The authors declare that there is no conflict of interest.

Financial Support: This work was supported by the Chang Gung Memorial Hospital, Taiwan (grant No. CMRPG3F0241-242 to C.C. Lin). The funder had no role in study design, data collection and analysis, decision to publish, or preparation of the manuscript.

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Received 21 April 2018

Accepted 13 July 2018



FIGURE A: Multiple blisters and hemorrhagic bullae at 20 h after the bite.

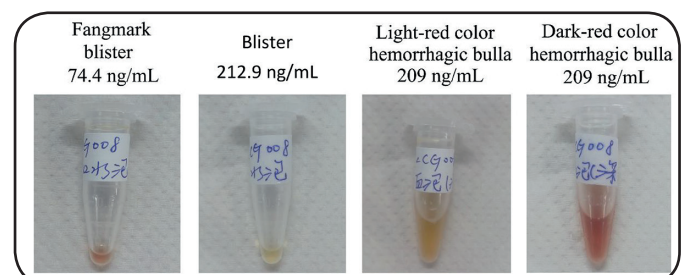


FIGURE B: Fluids collected from the blisters and hemorrhagic bullae.

REFERENCES

1. G Iliyasa, S T Halliru, Z G Habib, A B Tihamiyu, F M Dayyab, S B Abubakar, et al. Blister and Bulla Following Snake Bite in Nigeria: A Prospective Cohort Study. *Int J Trop Dis Health*. 2014;4(10):1069-77.
2. Jorge MT, Ribeiro LA, O'Connell JL. Prognostic factors for amputation in the case of envenoming by snakes of the Bothrops genus (Viperidae). *Ann Trop Med Parasitol*. 1999;93(4):401-8.
3. Rojnuckarin P, Mahasandana S, Intragumthornchai T, Sutcharitchan P, Swasdikul D. Prognostic factors of green pit viper bites. *Am J Trop Med Hyg*. 1998;58(1):22-5.