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Case report

First reported case of thrombocytopenia from a Heterodon nasicus

species: Heterodon nasicus, H. simus, H. kennerlyi, and H. platirhinos. Heterodon nasicus, commonly known as the Western Hognose Snake, is considered relatively easy to care for in captivity and is a common pet in North America. Specimens are well known for distinctive behaviors, including hissing displays, flattening of the head to appear larger and more threatening, and subsequently playing dead when threatened further. A medium-sized snake, averaging 50 cm in length and often found in loose soils, H. nasicus ranges from southern Canada to northern Mexico and from Illinois west to Colorado. It is a rear-fanged venomous snake that feeds mainly on amphibians, insects, lizards and birds. The medical significance of H. nasicus envenomations is unclear. Envenomations causing local toxicity including edema, pain, ecchymosis, and hyperpigmentation have been reported (Bragg, 1960; Grogan, 1974; Kroll, 1976; Morris, 1985; Phillips et al., 1997; Weinstein and Keyler, 2009

including factor X inhibition and platelet aggregation. While PLA_2s have been implicated in venom-induced thrombocytopenia (White, 2005) it is unclear if it is the cause of thrombocytopenia in this case. PLA_2 is present in the saliva but not the venom of H. nasicus(Hill and Mackessy, 2000), and it is likely that this patient was exposed to both saliva and venom during the prolonged duration of the bite.

Type 1 hypersensitivity reaction has been proposed as a mechanism (Weinstein and Keyler, 2009) of the local reaction caused by a H. nasicusbite. The quick onset of pain, swelling, and blistering may be a result of local IgE-mediated hypersensitivity due to the protein components found in H. nasicussaliva and/or venom. Previous studies have illustrated increased risk of Type 1 hypersensitivity reactions from people who keep captive venomous snakes (Hogan and Dire, 1990; Reimers et al., 2000), likely due to sensitization (de Medeiros et al.,2005ntanmichent case.ivityVi.4 ida22.9978274ivailluElapida22.9978833.1 (s.a)4[(i833C