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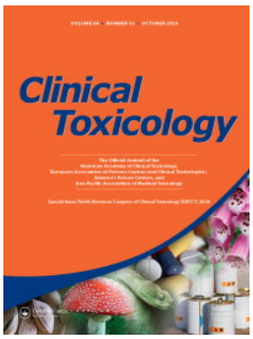
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The secretory life of pets: bites from western hognose snakes reported to the California Poison Control System

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ABSTRACT

Introduction: The western hognose snake (*Heterodon nasicus*) is a popular pet reptile. While sometimes classified as nonvenomous, it produces mildly toxic saliva from a low-pressure secretory organ in the temporal region (Duvernoy's gland), causing local reactions following snakebites. We aim to review cases from a statewide poison control system to characterize clinical effects and outcomes.

Methods: This is a 10-year retrospective review of calls about western hognose snakebite to the California Poison Control System, using product-substance codes and a free-text keyword search. Demographic, clinical, and bite-circumstance data were summarized and analyzed.

Results: There were 35 cases from January 2016 to March 2026, ranging from 11 to 82 years (median 22; IQR 18–29 years), of whom 69% were female and 46% were aged 21 years or younger. A large majority (89%) were bitten by their own pets; one bite occurred at a reptile exposition. All bites affected the hands, typically during feeding, handling, or enclosure cleaning. Local swelling occurred in 91% of cases, with extension to the wrist or forearm in 43%. Skin changes (ecchymosis, erythema or blistering) were noted in 26%, and 6% developed nausea and vomiting. Vital signs and labs, checked in 23% and 11% of cases respectively, were unremarkable. Management typically included wound care, tetanus vaccination update, and anticipatory guidance for infectious complications. Two patients required hospitalization for two or more days for treatment of presumed cellulitis. In one case with extensive edema, rattlesnake antivenom was administered due to doubts about the reported bite history; in the second case, antivenom was recommended for similar reasons, but withheld after photographic identification confirmed the pet snake.

Discussion: The western hognose snakebite can cause cytotoxic edema, and prolonged bites may pose a higher risk of severe injury. Clinical care should focus on pain control, wound care, and anticipatory guidance for post-bite infection and hypersensitivity reactions due to the components of snake saliva, which may require specific treatment with antibiotics or anti-inflammatory medications. Rattlesnake antivenom has no role in managing this type of snakebite.

Conclusion: Western hognose envenomation can lead to mild to moderate soft tissue injuries, which require supportive and symptomatic care and, rarely, hospital admission. Many bites occurred in pet owner adolescents, who may benefit from preventive safety education.

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Introduction

The western hognose (*Heterodon nasicus*) is a popular pet snake. Native to the western plains of the continental United States with a range from Canada to Mexico, this colubrid is bred widely in captivity in a variety of colors and patterns and noted for relative ease of maintenance with regards to diet and habitat needs [1]. Western hognoses are short snakes (average length 35 to 50 cm) with a distinct snout-like nose (Figure 1) that is useful for burrowing and digging up sandy soils. They can display a repertoire of behaviors ranging from a shy, docile temperament to dramatic bluffing displays of head-flattening, cobra-like posturing, hissing, and even playing injured or dead [2].

Although regarded as a "beginner friendly" pet species, bites from hognose snakes to humans can occur, causing pain, skin discoloration, and localized swelling

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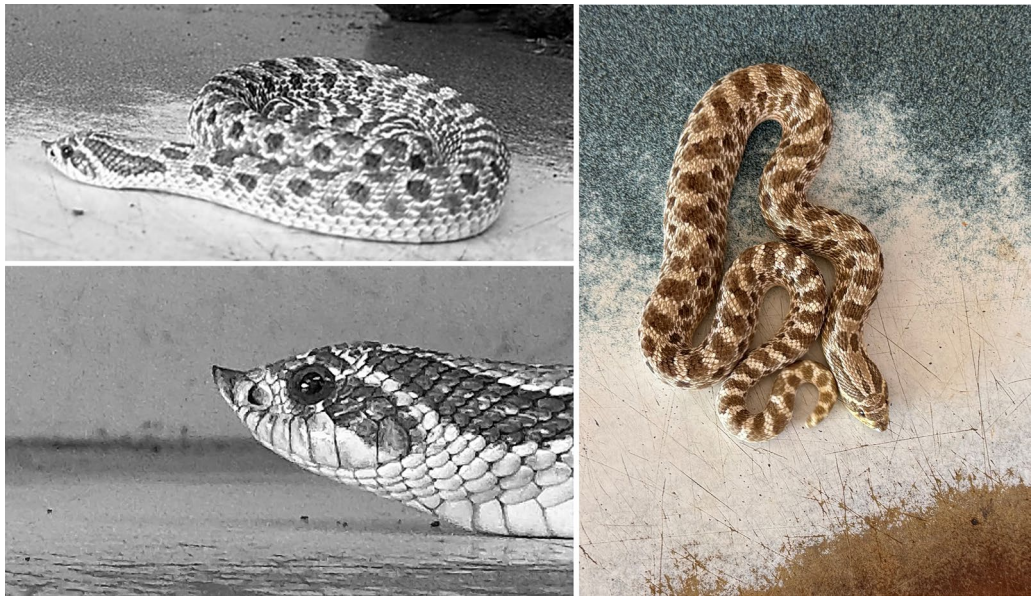


Figure 1. The Western Hognose *(Heterodon nasicus)*, a small and relatively docile colubrid snake with a distinctly shaped snout, is commonly kept as a pet in the US and worldwide.

near the wound. Case reports of severe local reactions, prolonged recovery time, and in one case, thrombocytopenia reflect more serious but rare outcomes from these encounters [3–6].

Poison control centers in the United States receive calls about western hognose snakebites and are asked to offer management advice about anticipated symptoms and signs. In this report we summarize a large series of western hognose snakebites reported to a statewide poison control system over ten years. The goal is to contribute to current epidemiologic and clinical knowledge about western hognose bites by documenting demographic characteristics, bite circumstances, clinical manifestations, and therapies given or recommended.

Methods

This was a retrospective study of case records of the California Poison Control System (CPCS), a network of four poison control divisions (based in Fresno/Madera, Sacramento, San Diego, and San Francisco) whose cumulative annual call volume was 245,914 in 2025. The CPCS electronic database (Intellitox™) was queried for de-identified case records of western hognose snakebites reported from 1 January 2016 through 17 March 2026. Search strategy combined the use of a free-text search for "hognose" and a screening search based on the America's Poison Centers® (APC) generic codes for "Unknown or Known Non-Poisonous Snake Bite" (137102), "Unknown Types of Snake Envenomation" (137000), and "Exotic Snakes: Poisonous" (137108). Non-bite cases, and snakebites not from a western hognose, were excluded.

The following data points were abstracted from each case record: date of call, site of caller, age, gender, type of snake, whether the bite was from a pet snake, anatomical bite site, circumstance of bite, co-morbid conditions, symptoms, duration of effect, vital signs, laboratory results, treatments, final management site, and outcome. Descriptive statistics were performed using Microsoft Excel (Microsoft Corp., Redmond, WA). The study was reviewed and approved by the University of California, San Francisco Institution Review Board (IRB ID:26-46061).

Results

There were 35 cases of hognose snake bites reported to CPCS from January 2016 to March 2026 (Table 1). Patient ages ranged from 11 to 82 years (median 22; IQR 18-29 years), including 16 [46%] patients aged 21 years or younger. There were 24 female patients (69%) and 31 patients (89%) confirmed being bitten by their own pets. All patients were bitten on or near the hand, with 23 (66%) reportedly bitten on a finger or thumb and one bitten on the wrist. Circumstances leading to the bite frequently included feeding the pet, cleaning the pet's enclosure, and/or handling or playing with the pet. One patient (case 21) relayed that they had consumed a meal with salmon prior to handling the snake, which may have triggered a feeding instinct targeting his finger. Another patient (case 7) was

Table 1. Western Hognose bites ($N = 35$) reported to California poison control system 2016–2026.

Patient	Age/ Gender	Bite site and circumstance	Symptoms	Management
1*	25M	Hand	Swelling up to wrist	Home Care
2*	21F	Hand (lateral)	Significant hand / forearm swelling, ecchymosis	Home Care
3*	12F	Right index finger	Swelling of finger	ED, routine discharge
4*	14F	Right palm; showing it to friends	Vomiting, hand edema	ED, routine discharge with oral amoxicillin/clavulanate
5	14F	Hand	Pain, swelling, redness	ED, routine discharge
6*	11F	Finger#	Hand swelling "to double the size"	ED, routine discharge
7	12M	Finger, bitten at a reptile exposition	Swelling of R index finger	ED, routine discharge
8*	35F	Hand	Pain, bruising and swelling	Home Care
9*	20M	Right middle finger; used listerine to detach it #	Pain, swelling, redness	Crotaline antivenom, prior to CPCS call; discharged from ED
10*	22F	Hand, bitten while cleaning the cage	Pain, swelling at the site	ED, routine discharge
11*	32F	Left fifth finger, was feeding pet	Pain and swelling	ED, routine discharge
12*	31F	Left finger AND left wrist	Tingling, burning and puncture marks	ED, routine discharge
13*	49M	Base of Index finger; waited 20 minutes for the snake to unlatch itself #	Presented to ED, and discharged with oral cephalexin; returned 2 days later with significantly more swelling up to the mid forearm; swelling progressed to the chest wall, with formation of blisters and ecchymoses (see Figure 2)	[7 day hospitalization] Treated with IV piperacillin/tazobactam for presumed cellulitis;methylprednisone for presumed allergic reaction; enoxaparin for DVT prophylaxis; morphine for pain; although recommended by CPCS, no crotaline antivenom given after photo confirmation of pet
14*	26F	Middle finger; latch time of 3 minutes#	Edema of finger, hand and wrist	ED, routine discharge
15*	29F	Right knuckle, PCC called on 3rd ED visit 4 days after bite	Redness, swelling, blisters up to humerus	[2 day hospitalization] Admitted for cellulitis treatment with IV antibiotics (vancomycin and piperacillin/ tazobactam)
16*	24F	5th finger	Swelling to the hand/wrist	ED, routine discharge
17*	22F	Hand	Localized pain/ inflammation	ED, routine discharge
18*	19F	Left hand	Hand and arm swelling	ED, routine discharge
19*	82M	Left hand, 15 minutes latch time#	Left hand swelling and ecchymosis	ED, routine discharge
20*	20M	R index finger, captured a wild snake to keep as a pet	Swelling in the finger and hand	ED, routine discharge
21*	19M	R middle finger; patient had salmon for dinner, snake likely smelled it on his hand	Puncture marks and finger edema	ED, routine discharge
22*	23F	Finger; routinely allows snake to bite her but this incident had long latch time#	Swelling and pain	Home Care
23*	24F	Left thumb; bitten while feeding animal, who "chewed for a while"#	Thumb swelling and pain	Home Care
24*	15M	Thumb	Local pain	Home Care
25*	20M	Dorsal index finger	Edema to mid hand, tingling	ED, routine discharge
26	24F	Thumb; bitten 2 days prior	Hand swelling and numbness for 2 days	ED, routine discharge
27*	18F	Left index finger	Hand edema	ED, routine discharge
28*	53M	Wrist, bitten the night prior to ED presentation	Edema to the forearm	ED, routine discharge
29	29F	Fourth digit	Edema to dorsal hand	ED, routine discharge
30*	76F	Left 3rd digit	Edema and redness to hand	ED, routine discharge
31*	22M	R middle finger; "was messing with it" 3 days prior to PCC call	Blister/bullae on the finger and decreased flexion	ED, routine discharge
32*	12F	Finger	Swelling	Home Care
33*	21F	Finger, long latch time, multiple prior bite attempts before this incident #	Redness, bleeding, clear fluid from wound, subjective fevers and chills, nausea, sore throat. Referred to ED, but lost to follow up	ED Referral Made
34*	23F	Right hand	Swelling and numbness in finger	ED, routine discharge
35*	15F	Middle finger	Hand and wrist edema	ED, routine discharge

Legend.
*: Patient was bitten by a snake that was being kept as a pet.
#: Report of the incident indicated a prolonged bite (latch time) before the animal could be removed.
ED, routine discharge: patient was managed and discharged from an emergency department.
Home care: case was managed with supportive care at home without seeking care at a health care facility.

reportedly bitten while attending a snake show/reptile exposition.

Most patients experienced a combination of pain, swelling, and skin discoloration at the bite site. Edema of the bitten area and/or hand were noted in 32 (91%) cases. In nine (26%) cases, changes in skin appearance (ecchymosis, erythema, or blister formation) were described. Two patients (6%) had nausea and

vomiting. Vital signs were only documented in eight patients (23%) seen in the emergency department (ED) but were mostly normal. In 15 (43%) cases, the swelling extended into the wrist or forearm. There was no thrombocytopenia, hypofibrinogenemia, or prothrombin time prolongation noted, but only four patients (11%) had these labs checked.

Seven (20%) patients were managed at home, while the remainder were referred to an ED or already at an ED at the time of the call to CPCS. Of these, two patients required hospitalization (for seven days and two days, respectively) and 26 (74%) were managed and discharged from the emergency department. Management most commonly recommended by the poison center staff included wound hygiene, tetanus vaccination update, and anticipatory guidance related to infectious complications. Most cases did not receive prophylactic antibiotics. In three cases (patients 4, 13, and 15), there was a suspicion of infectious cellulitis complicating the initial cytotoxic injury, and antibiotics were initiated in the ED or hospital, but no culture results were documented to indicate actual infection.

One patient (Patient 9) received four vials of crotalidae polyvalent immune Fab (ovine) antivenom, because the emergency department staff assumed that a rattlesnake bite had occurred due to the presence of pain and edema; the snake was later verified to be a hognose. In another case (Patient 13), rattlesnake antivenom was recommended by CPCS staff due to similar concerns with a severely symptomatic local reaction, but it was ultimately not administered, after photographic confirmation of the patient's pet hognose snake by the treating team.

Several illustrative cases provide details about bite circumstances and also suggest the range of clinical manifestations documented in case records:

Patient 4: A 14-year-old female was bitten on the right palm while showing the snake to friends. In the ED, she was described as having local pain and edema as well as vomiting. She was discharged within eight hours of ED presentation with analgesics, and a prescription for oral antibiotics.

Patient 6: An 11-year-old female was bitten on the finger and developed edema to the hand, causing it to double in size. Her pain and swelling were managed with supportive care, including acetaminophen, ice packs and elevation. She was discharged home after a brief period of ED observation and supportive care.

Patient 7: A 12-year-old male, bitten while attending a reptile exposition, developed edema to the index finger. He was discharged after a brief period of ED observation and supportive care.

Patient 9: A 20 years old man was bitten on the hand, and poured antiseptic mouthwash on the snake to make it disengage. Once he arrived to the ED, he was treated with four vials of intravenous crotalidae polyvalent immune Fab (ovine) antivenom, prior to CPCS being contacted. The snake was later confirmed to be a western hognose, and he was discharged from the emergency department.

Patient 13: A 49 year old female patient presented three days after a bite to the dorsal index finger, with a reported 20-minute latch time (e.g., the duration of time that the animal spent clinging and chewing on the hand). She experienced edema extending from the palm to the shoulder and chest wall, with ecchymosis, blisters and bullae formation (Figure 2). She required hospitalization for seven days, during which was treated with intravenous antibiotics, antihistamines, and corticosteroids.

Patient 15: A 29-year-old female was bitten on her knuckle by her pet western hognose and started on oral antibiotics after presenting to the ED. Poison control was initially contacted on her third ED visit, at which point she had developed progressive erythema, edema and blisters extending to the triceps area. She was admitted for a two-day hospitalization for intravenous antibiotics to treat presumed cellulitis.

Patient 22: A 23-year-old female presented with pain and swelling to her finger. She reported that she routinely allowed the snake to bite her, but this incident had an unusually long latch time (several minutes), after which she experienced excessive pain and swelling. She was discharged home after a brief period of ED observation and supportive care.

Patient 33: A 21-year-old female called the CPCS after experiencing a prolonged bite. She reported multiple prior bite attempts by her pet snake and was concerned because this time she was experiencing symptoms of erythema and serosanguinous fluid drainage from the finger wound, as well as more generalized symptoms of subjective fevers and chills, nausea and sore throat. The CPCS recommended that the patient go to the ED for further evaluation of her symptoms, but she was lost to poison center follow-up.

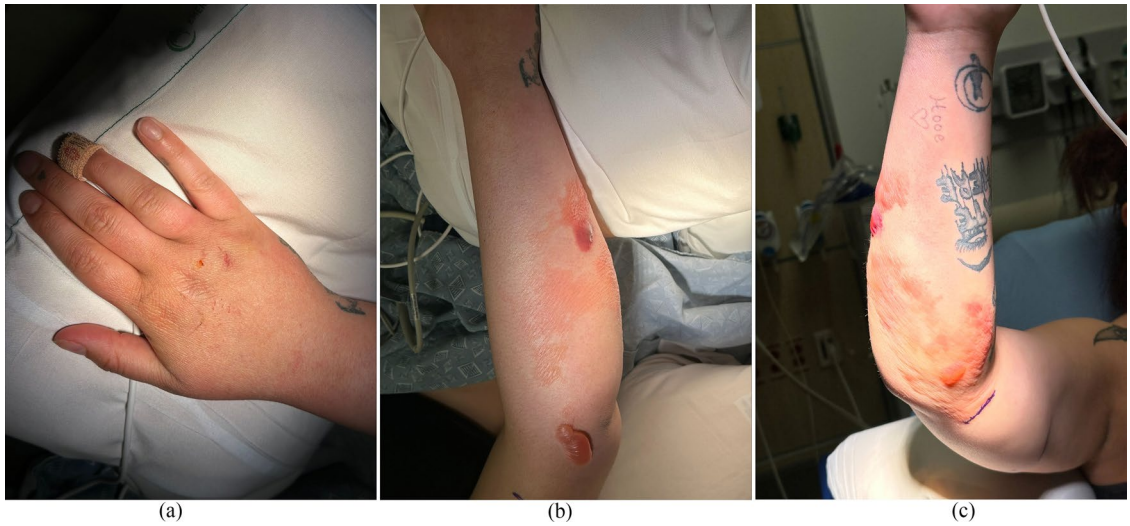


Figure 2. A 49-year-old woman (patient 13) was bitten on the dorsum of the right hand (a), and developed swelling reaching the chest wall, as well as erythema and fluid-filled blisters along the right upper extremity (b and c). Photos were taken on day three of a seven-day hospitalization; patient consented to the educational use and publication of these images.

Discussion

Pets are kept in an estimated 66% of American households (86.9 million homes), including 1.8% (2.4 million households) who keep pet reptiles [7]. Among pet snakes, the western hognose *(Heterodon nasicus)* is one of the most popular species, because of its relatively docile temperament and ease of captive maintenance.

Western hognose and other *Heterodon* species are classified as colubrids, a diverse group of snakes characterized by rear fangs and a low-pressure secretory organ, called Duvernoy's gland, which produces potentially toxic secretions [8]. Although clinical reports of hognose envenomation were published as early as 1960, the venomous components and apparatus of medically significant snakes that lack front fangs (such as *H. nasicus*) are still not completely defined [9–11]. In the *H. nasicus*, Duvernoy gland secretions have been found to contain the digestive enzymes phospholipase A2, snake venom metalloprotease, and phosphodiesterase [12]. Although this gland is not under muscular control and unable to store large volumes of fluid, the action of a tethering posterior ligament and masticating motions of the rear fangs and jaw may synergize with Duvernoy gland secretions to inflict tissue damage consistent with envenomation, particularly during an encounter characterized by chewing and/or biting for longer than 60 seconds [4]. Consistent with this proposed mechanism, prior published reports have made note of an association between prolonged bite duration and more pronounced local envenomation effects, though more investigation is needed to substantiate this relationship.

In contrast to bites due to crotalid and elapid snakes, western hognose snake bites typically result in low-acuity injuries [3–6,11,13–17]. In one recent internet-based survey of self-reported western hognose bites, the most common effects were edema, pain, pruritus, immobility, and erythema of the affected hand or finger [14]. Supportive care, antihistamines, ice and elevation have been recommended for acute bite management, and specific antivenom is not available, nor seems to be required, in most bites. Notably, the edema, skin discoloration, and discomfort at the bite site can last for weeks or months [3,6,11,13,14].

In light of these observations, hobbyists within the herpetology community have proposed that western hognose be classified as "warm herps," meaning that they should be considered mildly venomous [18]. The consequences of a western hognose bite do tend to be milder compared to those from crotalids and elapids (sometimes called "hot herps" by snake enthusiasts, to reflect the greater severity of their bite effects) but nonetheless can lead to clinically significant injuries that prompt patients to seek poison control recommendations and/or emergency medical care.

Our study supports this perspective and adds valuable information by summarizing calls about western hognose snakebites reported to the California Poison Control System (CPCS). This large case series of western hognose bites is the first drawn from poison center clinical records. Among 35 cases identified over a decade, the vast majority of patients were pet owners, and they skewed young and female in comparison to victims of rattlesnake bites [16,17]. Bites to the hand, sustained during animal handling or cage cleaning activities, caused some combination of pain, swelling,

bruising, and skin discoloration, and a significant fraction of patients experienced proximal extension of the soft tissue injury. Several patients reported that a prolonged bite encounter had prompted them to seek medical attention. Though not always well documented, a latch time of greater than 60 seconds was noted in several bites with more severe injury, including a patient (Patient 13) who required a 7-day hospitalization for venom-induced cytotoxic injury and possible cellulitis extending from the hand to the chest wall. Antihistamines and antibiotics were given in a number of cases, suggesting that allergic or infectious complications were suspected, even though confirmatory evidence of these sequelae were difficult to identify. We were unable to assess the duration of soft tissue changes, as almost all cases were closed by the poison control center before patients described a full resolution of their injury, and therefore unable to compare this cohort with published cases, some of which report weeks or months until full resolution.

A number of challenges and pitfalls appear to be unique to western hognose bites, in comparison to other types of clinically significant envenomation. These include the need to safely disengage a pet snake which may have latched onto the skin, the need to identify and treat allergic and infectious complications following western hognose bites, and the pitfalls of deciding for or against antivenom use in the face of diagnostic uncertainty.

Western hognose bites can sometimes result in a prolonged encounter, due to the snake "latching" onto the patient's skin, and sometimes instinctively chewing or grinding its jaws to facilitate the release of the digestive secretions from the Duvernoy glands. Not all patients may be familiar with how to safely disengage the snake, as pulling it forcefully may serve only to worsen the injury by alarming the creature and/or causing its teeth to insert further into the skin. Some sources cite the use of cold-water immersion or a mildly noxious stimulus (such as mint mouthwash; see Patient 9 above), without offering high-grade evidence about the utility of these steps [19]. General snakebite first-aid guidance recommends prompt but gentle disengagement, rather than forcible removal, to avoid injury to both patient and animal [20]. Consistent with this, a recent survey of western hognose bite victims found that immediate removal of the snake from the bite site was associated with a lower likelihood of developing symptoms [14].

Another challenge is the possible development of infection at the site of the bite wound. In our series, post-bite infection was suspected, but not confirmed, and antibiotics were initiated, in at least three cases (Patients 4, 13, and 15; refer to Table 1). Infectious cellulitis is rarely a concern with rattlesnake bites, which are the result of rapid strikes using sharp front fangs; prophylactic antibiotics are not recommended in these cases and post-bite infection is an infrequent complication [8,16,17]. Most authors conclude that prophylactic antibiotics are probably not needed for the great majority of western hognose bites either [3–5,13]. However, the unique role of latching behavior in western hognose bites might explain why bite duration, rather than fang morphology alone, might result in a slightly higher risk for clinically significant infectious complications. Brief defensive strikes (as with crotalids) may not maintain fang-tissue contact long enough for meaningful transfer of infectious pathogens, whereas prolonged bites (as with western hognose snakes) permit greater cumulative exposure to cytotoxic venom components as well as to the oral bacterial flora that might trigger an infection in and around the injured tissues of a bite wound. It is therefore reasonable to monitor and educate the patient about the development of cellulitis or other infectious complications in devitalized areas. Further research is needed to identify risk factors and diagnostic definitions for wound-related infections in western hognose bite victims.

Prior authors have also noted that allergic reactions, due to Type 1 hypersensitivity, may be a possible complication of western hognose bites, especially considering that most victims are pet owners having prior exposure to the biting snake. The presence of pruritus, first described by Bragg in his seminal 1960 case report [11] and mentioned multiple times in published cases since then, was not well documented in our case series. Nonetheless, topical or oral antihistamines appear to be a safe and effective medication to address this complication and were administered or prescribed many times for patients in this study. More serious allergic reactions, such as anaphylaxis, have not been described in the literature and did not manifest in our series. Future investigations of risk factors for allergies (e.g., immunologic sensitization) among pet owners may add some valuable insights.

Lastly, one pitfall of caring for these injuries is illustrated in the report of a 21-year-old (Patient 9, described above) whose bite was assumed to be from a rattlesnake, leading to the administration of a typical initial dose of crotalidae polyvalent immune Fab (ovine) antivenom. While it is understandable that an equivocal or incomplete history may lead to diagnostic confusion in an emergency department setting, it should be emphasized that there is no role for rattlesnake antivenom in cases where the clinical history (or

photo documentation) can clearly identify the snake as a hognose snake being kept as a pet. Pet owners are usually quite reliable sources of information about which species of snake they own, and frequently able to share photos with treating clinicians to help confirm the type of animal in question. (For reference, an adult western hognose is shown in Figure 1; note that colors and patterns in the western hognose population can be variable).

Our research identified several opportunities for prevention education, home and hospital management, and potential areas for future research. Table 2 summarizes the salient prevention and management points, based on published reports and the present case series, that may aid poison control hotline staff, education teams, and consulting medical toxicologists when addressing western hognose bites. As with other cytotoxic envenomations, toxicologists and poison control experts should focus on pain control and meticulous monitoring for edema and local inflammatory skin changes. Clinicians should also anticipate a wide range of effects related to soft tissue injury following a western hognose bite. This study, along with prior published reports, suggests that sequelae can range from minimal changes that can be managed with home-based first aid to more symptomatic outcomes with severe pain, swelling, ecchymosis, blister formation, and possibly infectious cellulitis, typically requiring emergency department care.

This study also suggests opportunities for prevention education for pet owners, breeders, and vendors. All bites were on or near the hand, and related to handling, feeding, playing with the snake or cleaning the animal's enclosure. Almost all animals were being kept as captive pets (no wild encounters described), and a significant number of bites happened while feeding snakes, which was also a common circumstance in published western hognose bite reports. Prevention and safety messaging about pet hognose snakes should address higher-risk situations, and encourage hand washing and feeding tong or glove use, as well as appropriate steps to take in case of a bite to minimize latch time. Given that so many of the patients in our report (46%) were pet-owning adolescents, relevant education targeted to this demographic should be a priority in herpetoculture.

While this study did not address the topic, future research could document how long bite effects last, as previously published individual accounts indicate that swelling and symptoms may last for weeks. Another issue which could benefit from future inquiry is the role and severity of systemic reactions causing some of the symptoms observed. Incomplete information about vital signs and very few laboratory markers were found in this data set, limiting how much we can describe about these issues. However, most patients appeared well clinically, without bleeding or oozing suggestive of coagulopathy or thrombocytopenia. Future reports, particularly about cases treated in a health care facility, could investigate the incidence and possible mechanisms of allergic, infectious, and coagulopathic complications of western hognose bites.

Table 2. Key points in western hognose bite prevention and management.

1. Western hognose (*Heterodon nasicus*) snakes, while popular as pets throughout the US and the world, have the potential to cause envenomations with local tissue reactions such as pain, swelling, pruritus, erythema and blister formation.
2. Pet owners should use feeding tongs and/or gloves when delivering food, keep the pet snake a safe distance away while cleaning its habitat, and wash hands after handling food items to minimize the chances of a bite during these routine activities.
3. Once a western hognose snake bites, it may latch on and make chewing motions, both of which increase the risk of a more severe bite reaction. To avoid a prolonged bite, owners should attempt to gently and promptly disengage the snake rather than forcibly pulling it off, which risks mutual injury and may worsen the bite.
4. First aid for western hognose snake bite includes removal of clothing or jewelry in anticipation of edema; thorough washing of the wound with soap and water and cool water immersion; and elevation of the extremity, as needed, for comfort. Home management (with adult supervision/ observation for minors) is appropriate in cases where there is minimal pain/swelling/ erythema. Make a plan for frequent rechecks and seek medical attention if there are signs of injury progression.
5. Acetaminophen, NSAIDs and antihistamines may help minimize discomfort related to inflammation and pruritus. Be aware that many victims/pet owners may be adolescents, so pediatric dosing guidance for medications should be provided if home care is advised.
6. Emergency department referral is appropriate if there is moderate to severe pain or edema, blister formation which might require wound care/ debridement and placement of sterile dressings, or evidence of systemic signs (vomiting, chills, fevers, or severe allergic reaction). Tetanus vaccination should be given, as needed.
7. Antivenom is not available for western hognose snake venom, and Crotalid (rattlesnake) antivenom should not be administered in cases where there is a clear and unequivocal history of a western hognose bite. Pet owners are usually quite reliable sources of information about which species of snake they own, and frequently able to share photos to help confirm the type of animal in question.
8. Infectious complications such as cellulitis/ abscess, while theoretically possible following any animal bite, are not well documented in cases of western hognose bite reports. Prophylactic antibiotics are not indicated, but broad-spectrum antibiotics should be considered if there is fever, expanding warmth and induration of the skin, abscess formation, or laboratory markers indicating infection.
9. While long-term prognosis is favorable, patients and clinicians should be aware that some bites can cause skin changes and swelling with discomfort that takes weeks to resolve.
10. Consultation with a regional poison control center and/or medical toxicologist can help facilitate decisions related to diagnosis, treatments, and disposition/monitoring.

Limitations

Retrospective reviews of poison control data have several inherent limitations. Poison center reports depend on real-time data entry based on information gathered in phone calls from clinicians, patients, or other layperson caregivers. Most of our reports lacked independent confirmation that the bite was actually from a western hognose. There is also the possibility for miscommunication related to the physical exam findings that patients and caregivers described over the phone. Our series may not have captured all of the western hognose snakebites in California during the study period, as reporting to CPCS is voluntary, and patients with mild symptoms may be less likely to seek the advice of the PCC or to seek medical care. Clinicians, similarly, may not feel the need to contact a poison control center in minor cases, further limiting the completeness of the available records. At least one case, with potentially systemic complications (Patient 33), was lost to follow-up, highlighting the limitations of voluntary reporting to poison control centers.

Conclusion

Western hognose snakes, while popular as pets throughout the US and the world, have the potential to cause local tissue injury, especially after prolonged bites. Pet owners should be educated about proper feeding, handling, and cage-cleaning procedures to minimize the risk of their pet snake biting them. Pain, swelling, pruritus, erythema and blister formation are the most common features of western hognose envenomation. Basic wound care, antihistamines, and anti-inflammatory medications are recommended for acute management. Although prophylactic antibiotics are usually not indicated, close monitoring is warranted to detect post-bite infections. Antivenom is not available for western hognose snake venom, and crotaline antivenom should not be administered in cases where there is a clear and unequivocal history of a western hognose bite.

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