

# Iguana Bites to the Face

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Pet reptiles have increased in popularity in the United States to the extent that 3% of households now contain these animals.<sup>1</sup> The most common pet reptile is the iguana, and the most common of these lizards is the green iguana (*Iguana iguana*). As the popularity of these creatures in US households continues to grow, so will the threat of bites. To date, little North American medical literature has been devoted to nonvenomous reptile bites, and particularly little has been devoted to iguana bites.

Review of the available medical literature on iguana bites uncovered four published cases.<sup>2,3</sup> There is no information on frequent injuries to the head or facial areas. Two cases are reported here because of their striking similarities with respect to location and appearance of the bites.

## Case Reports

### Case 1

A 42-year-old woman was seen 2 days after having been bitten by a large (5 1/2-foot) pet iguana that belonged to her neighbor. The patient was attempting to pet the animal while gently blowing air from her mouth onto the iguana's back (she was under the impression that this was soothing to the animal). The iguana suddenly lunged forward and bit her twice on the nose. There was immediate moderate pain, which resolved within several minutes to a dull pain with minimal swelling. When examined, the patient had two small puncture wounds on each side of her nose (Figure 1). The nares were patent, there was no evidence of cellulitis or adenopathy, her neck was supple, and there were no systemic findings. The wound was cleaned, and a triple antibiotic ointment was applied. Ibuprofen and cefadroxil were prescribed. When the patient's wound was observed several days later, it was healing properly, and there was no evidence of infection.



**Figure 1.** A 42-year-old woman with two puncture wounds on each side of the nose 2 days after being bitten by an iguana.

### Case 2

A 16-year-old boy was seen 1 day after being bitten by his pet iguana as he attempted to pet it. As with the first patient, the lizard unexpectedly lunged forward to bite him on the nose. The patient called the veterinarian and was advised to seek medical attention. He was also informed that iguanas are particularly aggressive during the mating season. When examined, he had two superficial lacerations on his nose (Figure 2). The nares were patent, and there was no evidence of cellulitis, adenopathy, or systemic involvement. After the wound was cleaned and triple antibiotic ointment was applied, the patient was sent home with a prescription for cephalexin. On reevaluation, the wounds were healing with no evidence of infection.

## Discussion

The literature currently describes no specific diseases that are commonly caused by inoculation from iguana bites. One case report documents *Serratia marcescens* cellulitis after an iguana bite.<sup>4</sup> There is, however, a considerable amount of information on salmonellosis in humans that has resulted from exposure to iguana feces.<sup>5</sup> More than 80% of captive iguanas shed *Salmonella* in the feces,

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**Figure 2. A 16-year-old boy with two superficial lacerations on his nose 1 day after being bitten by his pet iguana.**

which can create health risks for those who are bitten by or exposed to the feces of these animals.<sup>1,6</sup>

Although nonvenomous pet reptile bites are not frequently seen in the primary care physician's office or the emergency department, the choice of iguanas as pets is increasing (795,000 of these animals were imported to the United States in 1995, compared with 139,000 in 1989) and could well lead to more treatment for bites.<sup>2</sup> Treatment of iguana bites can include prophylactic antibiotics if the depth or severity of the wound is serious. Thorough cleaning, review of tetanus immunization, and observation might suffice as long as there is careful monitoring for signs of infection. Because iguanas and *Salmonella* are so strongly linked, the choice of antibiotics should include agents that are specific for *Salmonella* species as well as normal human skin flora.<sup>2</sup>

There also exists a risk of nontraumatic illnesses from exposure to iguanas and their nearly ubiquitous infection with *Salmonella*. Serious illness leading to fever, loose stools, vomiting, and even death can result from *Salmonella* infection.

### Conclusions and Recommendations

There is currently no information to suggest that iguana or other nonvenomous reptile bites should

be evaluated and treated any more aggressively than other types of mild trauma to the skin. Appropriate therapy with antibiotics and a tetanus booster are prudent if the wound clinically appears to be at risk for superficial or deep tissue infection. If antibiotics are considered to be necessary, it might be prudent to select a quinolone or other antibiotic that will treat *Salmonella* as well as human skin flora infections.

Because of the potential morbidity and mortality from *Salmonella* infection, the following recommendations have been posted by the Centers for Disease Control<sup>7</sup>:

1. Persons at increased risk for infection or serious complications of salmonellosis (eg, pregnant women, children less than 5 years of age, and immunocompromised persons such as those with acquired immunodeficiency syndrome) should avoid contact with reptiles.
2. Reptiles should not be kept in child care centers and might not be appropriate pets in households in which residents are at increased risk for infection.
3. Veterinarians and pet store owners should provide information to potential purchasers and to owners of reptiles about the increased risk of acquiring salmonellosis from reptiles.
4. Veterinarians and operators of pet stores should advise reptile owners to wash their hands every time they have handled reptiles or reptile cages.
5. Reptiles should be kept out of food preparation areas (kitchens, etc) and other selected sites to prevent contamination. In particular, kitchen sinks should not be used to bathe reptiles or to wash reptile dishes, cages, or aquariums.

At this time, we do not have sufficient information to predict when an iguana or other nonvenomous reptile might be more aggressive and more prone to bite. Certain aggressive behavior, such as head bobbing, nodding, or charging, might warn of an impending bite.<sup>1,8</sup> Further case reports and medical documentation of iguana and other nonvenomous pet bites might yield trends that allow pet owners and physicians to formulate preventive strategies.

## References

1. Mermin J, Hoar B, Angulo FJ. Iguanas and *Salmonella marina* infection in children: a reflection of the increasing incidence of reptile-associated salmonellosis in the United States. *Pediatrics* 1997;99:399–402.
2. Kelsey J, Ehrlich M, Henderson SO. Exotic reptile bites. *Am J Emerg Med* 1997;15:536–7.
3. Teitel AD. B(n)ite of the iguana. *Am J Emerg Med* 1990;8:567–8.
4. Hsieh S, Babl FE. *Serratia marcescens* cellulitis following an iguana bite. *Clin Infect Dis* 1999;28:1181–2.
5. Austin CC, Wilkins MJ. Reptile-associated salmonellosis. *J Am Vet Med Assoc* 1998;212:866–7.
6. Burnham BR, Atchley DH, DeFusco RP, et al. Prevalence of fecal shedding of *Salmonella* organisms among captive green iguanas and potential public health implications. *J Am Vet Med Assoc* 1998;213:48–50.
7. Reptile-associated salmonellosis—selected states, 1994–1995. *MMWR Morb Mortal Wkly Rep* 1995;44:347–50.
8. Chiodini RJ, Sundberg JP. Salmonellosis in reptiles: a review. *Am J Epidemiol* 1981;113:494–9.