MANAGING THE TOP FIVE MOST COMMON REPTILE EMERGENCIES

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The term *emergency* obviously means different things to different people. My definition of an emergency is an issue which requires immediate intervention to prevent death, irreversible disease/injury progression, or pain. However, a client's definition(s) of emergency often includes they "just noticed the problem," "this was a convenient time to come in," they were "starting to feel guilty about the issue," they "thought it would die a long time ago, and it has not," and of course anything involving blood. Another possibility to consider is something normal appearing abnormal to an individual not aware that such things are normal in that species. Trying to summarize all the emergencies that might be seen is beyond the scope of this presentation; however; the five most common presentations for pet reptiles will be discussed, including rule-outs, diagnostics, stabilization, prognosis, and long-term treatments.

With exotic animals, problems may present at a very advanced stage or clients may not have the finances/desire to pay for the more advanced diagnostics and therapeutics that can be provided with what they view as a disposable pet. Therefore, the veterinarian may need to have The Quality of Life Talk sooner than one might expect. While one should always offer the highest level of care or to refer, many times this is the first time an individual has brought a snake or gecko into a veterinarian and they often expect cost of care to reflect the size of the animal. As with all animals, emergencies often place the client into a very emotional state. As a veterinary team, our first job is to manage the welfare of our patients; however, we also have to be very careful about discounting or not receiving proper payment for our services. Once stabilized, clients should be provided both a short-term picture and prognosis but also provided a longer-term view of where things may be headed. A common question asked to both the veterinarian and the technician is "If it was your …." I prefer to always answer this honestly and often provide two forms of answer: "If this pet means everything to me (or my child)….", and "if I care about the animal's well-being and do not want it to suffer, but there are limits to where I want to go…." Unfortunately, euthanasia as an option becomes the gorilla in the room but should be discussed from the very beginning if it is a viable option. With some of these presenting conditions, providing client guidance as to determining points of exit can be helpful, along with providing hospice care versus hospitalized care or euthanasia options only. Another challenge with many exotics are owner-present euthanasias. Many times, the final injection will be delivered intracardiac, so preparing a client for this is critical. It goes without saying that intracardiac injections without prior general anesthesia are considered inhumane in any animal. As with mammals, reptiles can present for a variety of reasons, with sadly, the category of chronic, non-resolving disease often being at the top of the list.

TRAUMA

Trauma can occur from cagemates, dogs/cats, their food items if fed live prey (even invertebrates), humans, and poor cage design. Bite wounds and linear foreign body constrictions may not manifest until several sheds have occurred. Oral/facial trauma can occur from repeated attempts to go through glass and the placement of a visual barrier such as dark construction paper outside the cage may be needed. They can permanently malform the maxilla/mandible interface and create sterile abscesses. Digit loss usually manifests at or during shed (ecdysis). Ripped off/unsheathed toenails occur in heavy bodied lizards hanging from wire cages with horizontal wiring that allows climbing. Retained shed constrictions, string, and "nibbling" by invertebrates or cagemates directs management. Snakes in particular often present for trauma/being wedged somewhere during escape attempts. Management depends on the cause and severity, but may include antibiotics and surgical intervention. Pain management should always be considered, but dose and effectiveness in reptiles is certainly poorly understood. With fractures, consider underlying metabolic bone diseases as an etiology.

Certain lizard species rely on tail autonomy to live to fight another day in the wild. In captivity, grabbing these same species by the tail can induce a twitching tail separated from its body, a bit of blood, and general hysteria from the uneducated owner (or the unlucky veterinarian). For species that naturally undergo this process, a pressure bandage until the bleeding has stopped is important. Later steps usually include judicious trimming of stringy tendons. In most cases, the tail will regrow, with cartilage replacing bone, the sharp tip of the tail replaced with rounding, a blunting dorsal spikes if present, and a uniformly gray/brown color. While it varies from species to species, most with autonomy will regrow the tail if more than 25% of the total length remains. Less than that and it generally advised to surgically close the site with proper surgical preparation and technique. Likewise, surgical closure is recommended with tail loss in non-autonomy species. An interesting aspect to consider is that reptiles have their spinal cord go the entire length of vertebrae in the tail—it does not regrow length with tail regeneration.

Burns can result from hot rocks, heat pads on glass (especially ball pythons), and access to heat lamps. A more recently described spin-off is ultraviolet radiation burns to the skin or corneas. Like other trauma, burns may not manifest until the next shed, so often are not as acute as initially expected. Burns very easily can be full-thickness into the coelomic (abdominal cavity), requiring more aggressive management. Systemic antibiotics, pain management, and repeated wound management are needed, along with correction of the underlying problem. Silvadene cream is often advisable for topical treatment. If second intention healing is required/ recommended, the client should be advised that it may be months to years before complete healing in severe cases. Contamination of these wounds, especially if on the reptile's ventrum, is a distinct possibility for animals that crawl through their own feces or sit in a "soaking container" that is rarely disinfected. Bandaging presents its own challenges, with skin sutures to tie

bandages to or creative options such as syringe cases or even condoms on snakes being tried.

GASTROINTESTINAL FOREIGN BODIES

Bedding can be a problem as an ingested foreign body, an inhaled foreign body, or as a topical irritant. In particular, cedar, pine and other aromatic wood can produce toxic chemicals. Snakes are built with no ability to remove something easily from their mouth, with even their back-curved teeth only helping an unwanted item in the mouth to have one direction to go, into the stomach. Feeding snakes in an area free of bedding is generally recommended. A special note should be for the cricket gel used to provide water (can also be found in soil as plant bedding). This material expands when water is added and has been documented to kill amphibians, reptiles, and birds from gastrointestinal rupture.

Many reptile clients like to expedite the feeding of their reptiles with the thought that bigger is better. But sometimes bigger is actually bad. Most reptiles have the ability to regurgitate something if it cannot complete its journey down, but malpositioning or other factors can confound this mechanism. Most carnivorous and insectivorous reptiles do not chew their food, often swallowing it whole, and sometimes alive. There has been some suggestion that the larger beetle larvae such as phoenix worms, superworms, or mealworms can “eat their way out” of the stomach, much like the movie “Alien.” This may or may not be true; however, I have seen impactions, obstruction, and eventual death from large larvae such as this. Another note is the proclivity of certain lizards, some turtles/tortoises, and some amphibians to ingest sand/rocks from their environment and impact. Death has been confirmed in several cases from a supposedly digestible sand that is calcium-based. I do not recommend using this product. We do not know why some individual reptiles practice this pica activity, but prevention should be advised for all animals. As with mammals, free-roaming reptiles can be at risk to eating things of an undesired nature. Heavy metal toxicity can occur and often ingestion of coins, fishing weights, and necklaces are unnoticed. Iguanas seem to enjoy eating hair/carpet fibers, and I have had two iguanas have those wrap around the glottis and completely saw through them.

NEUROLOGIC PRESENTATIONS

Seizures, muscle tremors, or weakness can indicate toxicities, metabolic bone disease, and so on. Many of these conditions are due to either nutritional secondary hyperparathyroidism in young animals or renal secondary hyperparathyroidism in older animals. Underlying issues such as incorrect husbandry and diet should be addressed. The former manifestation has been described as extremely painful in mammals, so pain management should be considered. It can be critical to assess total calcium, ionized calcium, and phosphorus levels to get the entire picture, along with performing radiographs. Management generally requires long-term views, with at best guarded

prognosis. Euthanasia is not an unreasonable recommendation in severe cases or cases where client commitment may be lacking. Always assume a reptile is female until proven otherwise, as reproductive complications may be an underlying component. Assessment of the severity/stage of reproduction may need to be evaluated by a specialist.

Toxins can be ingested, from contact, or for aquatic species, in the water. Reptiles seem to have a slower response to these products, so often the client may not be aware of the exposure because of the length of time. Many reptile owners also self-treat medical problems with dangerous products or incorrect use of items. A well known example is the sensitivity of turtles and tortoises to ivermectin, likely due to a similar mechanism as in collies. Fenbendazole toxicity has been described in a number of species as have several ingested plant toxicities. Amphibians are much more acutely sensitive to such exposures and should be considered almost as if they are fish in terms of water quality evaluation.

RESPIRATORY PRESENTATIONS

Respiratory distress may be secondary to other serious problems. Clinical signs include: open mouth breathing (snakes that are “yawning” frequently), discharge from the nostrils, an increase in moisture in the mouth, or aquatic turtles remaining out of the water. It is important to remember that reptiles lack a diaphragm, so “abdominal” issues can severely affect respiration. Likewise, unfamiliarity with species-specific behavior can lead to unnecessary emergency presentation.

Reptiles outdoors during the spring and fall or allowed free roam in the house may be subjected to cooler temperatures. Gradual warming of the reptile is recommended. These can be the underlying reason for chronic diseases, especially respiratory ones. Reptiles that are incorrectly hibernated often break with respiratory infections.

Turtles and tortoises can have shell injuries occur from a dog bite, lawnmowers, or hit by car, and there may be internal injuries. Clean the area around the injury with germicide scrub and rinse with warm water. Apply silver sulfadiazine cream and call a specialist. Treat as a contaminated open wound with possible fractures; do not seal up until infection is under control. Wet-to-dry bandages and vacuum-assisted closure are recommended. Trauma to the carapace can lead to respiratory issues due to lung exposure. They also breathe via movement of their limbs, so issues there can compromise their respiratory system.

REPRODUCTIVE PRESENTATIONS

Egg-binding/dystocia is a common presentation. Reptiles can lay unfertile eggs, so even solo reptiles can be affected. Misidentification of sex is very common. Clinical signs may include depression, anorexia, muscle tremors, or cloacal prolapse. Radiographs, ultrasound, and blood work may help with diagnosis; however, some cases may require an exploratory surgery to cut to the chase. The challenge in assessing these situations is

whether progression is normal or abnormal, as the starting time of the cycle is often unknown.