Most reptile emergencies are secondary to inappropriate husbandry for the species. It is important when taking a history to discuss housing and diet, and to determine how the owner is measuring parameters such as temperature and humidity. Reptiles may tolerate inappropriate husbandry for very long periods of time before disease manifests. Clients often fail to recognize disease in their pet and seek veterinary assistance only in advanced stages of disease. The diversity of species also presents a challenge, and the clinician must be familiar with what is normal for each species in order to recognize the abnormal.

It is important to hospitalize reptiles under optimal environmental conditions, including temperature, diet, humidity, light, noise, activity, and exposure. Reptiles have been shown to select higher temperatures in response to bacterial infection, and an ambulatory patient is better able to select an appropriate temperature than the clinician. To thermoregulate properly, the patient needs to have a range of temperatures to choose from. This is accomplished by use of a radiant heat source such as incandescent heat lamps or ceramic heat bulbs to create an even gradient. Contact heat sources do not provide a range of choices for the critical patient. Appropriate hiding areas must be provided throughout the temperature gradient. In non-ambulatory animals, the clinician must choose the temperature for the animal, making it even more critical for the clinician to be familiar with the species. There is greater potential for iatrogenic injury from hyperthermia than hypothermia. More rapid recovery from acidosis and improved immune function have been found at slightly low temperatures as compared to high temperatures, and the critical thermal maximum is decreased in dehydrated reptiles.

After taking a history and performing a physical exam, collection of a laboratory database is useful for determining the metabolic and inflammatory status of the patient. Ten percent of the blood volume may be safely withdrawn for determining plasma chemistry and hematology. Most reptiles have a venous pressure of greater than 40 mmHg, however, the pressure will decrease in patients with respiratory compromise. Fresh clean skin lacerations may be closed using an everting suture pattern with non-absorbable monofilament suture. Drains are not very efficacious in reptiles. Antibiotic therapy should be initiated. Shell injury repair methods in turtles include use of wires, screws, and plates. Use of epoxy is not appropriate due to the presence of a visceral cavity. Fresh clean skin lacerations may be closed using an everting suture pattern with non-absorbable monofilament suture.

Burns due to inappropriate or malfunctioning heat sources are another common cause for emergency presentation of reptiles to the clinician. Heat rocks frequently short and overheat. If the ambient temperature is too cool, the reptile will be forced onto the heat rock and will burn itself. Inappropriate access to heat lamps may result in similar burns. Many burns may extend through the full thickness of the skin. By the time a case is presented, diagnosis of thermal burns is typically evident from physical exam and history. Reptiles may have erythematous skin and blistering; it is important to distinguish burns from sepsis. Fluid support and electrolyte homeostasis is important in burn patients. Systemic antibiotic therapy should be initiated, and topical silver sulfadiazine cream is useful as an adjunct. Wet to dry bandages or semipermeable bandaging are useful in covering wounds while granulation occurs.
Dystocia is another common cause for emergency presentation of reptiles. Reptiles without appropriate egg deposition sites will frequently retain eggs. Poor physical condition may also result in egg retention. Of more urgent concern is physical obstruction of oviposition, which may be due to abnormal or broken eggs, cystoliths, and reproductive tract malformation or scarring. This may block urination and defecation. Physical examination will usually reveal palpable eggs in the coelomic cavity. Turtles and tortoises may be palpated in the prefemoral fossa. Radiographs are useful for diagnosis of abnormalities such as broken or abnormal eggs or cystoliths. Preovulatory follicles will not show shell deposition and appear as soft-tissue density. Ultrasound is useful in diagnosis of unshelled egg retention. Bone density should be evaluated as an indication of calcium stores. Evaluation of serum chemistry and hematology is useful for identifying underlying abnormalities. Gravid female reptiles normally have significantly higher plasma calcium and phosphorus, and may be functionally hypocalcemic despite high total plasma calcium, and resultant atony of the reproductive tract may result. Evaluation of ionized calcium is helpful for proper assessment. Reptiles with dystocia should first be stabilized. Fluid therapy should be commenced as appropriate. Once patients are stabilized, they should be reevaluated. When no physical obstruction is present and patients are provided with a suitable location for egg deposition, the situation will often resolve. Reptiles often respond well to injection of oxytocin at 5-10 mg/kg if calcium is corrected first. If patients have a physical obstruction, surgical removal is necessary and should be initiated once the patient is stabilized. Occasionally, very caudal malformed eggs may be deflated by ovocentesis per cloaca and removed.

Renal failure is very common cause for presentation of depressed adult green iguanas. Enlarged and irregular kidneys may be palpated digitally via the vent. Iguana kidneys should not protrude from the pelvis. Hematology may be of use in diagnosing infectious causes of renal disease. Urinalysis is not typically useful in evaluation of renal function. Since the ureters empty at the opening into the cloaca, urine samples are typically contaminated with fecal material. However, the presence of tubular casts is of clinical concern. Creatinine and blood urea nitrogen are not useful tests for renal function in reptiles. Uric acid is of greater clinical use; however, it is eliminated by tubular secretion and does not reflect GFR. Urates are less soluble than urea, and the lower body temperatures found in reptiles results in even less solubility. Uric acid elevations are often seen only late in kidney disease. Another biochemical indicator of renal disease is the calcium: phosphorus ratio. A ratio of less than 1 is suggestive of renal disease. The most definitive method of diagnosis is renal biopsy. Treatment of renal disease is aggressive fluid therapy. In cases of infectious nephritis, appropriate antimicrobial therapy should be provided.

Sepsis in reptiles is a common sequela to poor husbandry and stress. Septic squamatres may present with proliferative vertebral osteoarthrosis. Signs of septicemia in reptiles include depression, anorexia, weakness, erythema, and petechiation. Septic reptiles will often be hypotensive due to septic shock. Evaluation of a blood smear is helpful in diagnosis of sepsis. Septic reptiles will have toxic heterophils. Bacteria may often be seen on the blood smear. Blood cultures are useful for identification of bacteria and sensitivity profiles, and are more frequently productive than in mammals. Appropriate intravenous or intraosseous fluid and antibiotic therapy should be commenced. Ceftazidime, a third-generation cephalosporin, is commonly used as a first choice in septic reptiles at a dosage of 20 mg/kg intramuscularly every 72 hours.

Dyspnea in reptiles may be due to primary respiratory disease or extrapulmonary interference with pulmonary function. Common causes of primary upper respiratory tract disease include trauma, Mycoplasma agassizzi in North American tortoises, tracheal chondromas in ball pythons, and herpesviruses or iridovirus in tortoises. Obstructive periglottal lesions associated with a herpesvirus has been seen in lizards. Some species of lizards, notably the green iguana, have salt glands in their nares; salty discharge is normal and should not be confused with respiratory disease. Common causes of lower respiratory tract disease include bacteria, viruses, trauma, parasites, and fungi. Most bacteria isolated from reptiles with pneumonia are aerobic gram-negative rods. Patients with bacterial pneumonia should be screened for underlying predisposing conditions such as improper husbandry, infection with more fastidious bacteria such as Mycoplasma spp and Chlamydia/Chlamydophila spp, fungal disease, or viral disease. Extrapulmonary causes of dyspnea include gastrointestinal bloat, dystocia, abscesses, tumors, and ascites. Radiographic evaluation of lung fields including horizontal beam radiographs is helpful in identifying fluid in the lungs, extrapulmonary causes of dyspnea, and aortic mineralization, which is commonly be seen in lizards and may indicate a cardiovascular component to ascites. Sample collection by tracheal/pulmonary wash followed by cytological evaluation, culture, and sensitivity is indicated in cases of pneumonia. Appropriate antibiotics and oxygen therapy is indicated.

Prolapse of the cloaca may be of reproductive, urinary, or gastrointestinal origin. In females, oviduct and shell gland prolapse typically occur secondary to dystocia. Paraphimosis typically occurs when there is trauma to the everted penis. It is most often seen in aquatic turtles secondary to bite wounds when multiple turtles are housed together. The most common cause of urinary bladder prolapse is cystoliths. Colonic prolapse may be secondary to constipation, bacterial enteritis, and parasitic enteritis. Identification of the prolapsed material is helpful for identification of the underlying cause of the prolapse. If the tissue is vital, reduction and placement of transverse cloacal sutures is indicated. Colopexy may also be performed. If tissue is not vital, resection and anastomosis is indicated.

**REFERENCE**