

# CLOACAL ORGAN PROLAPSE IN REPTILES

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**Monica Guerrero-Mendez** discusses reptilian organ prolapse, highlighting the clinical signs, diagnostics and relevant treatment as well as preventive measures

**PROLAPSED organs through the vent in reptiles can be a common finding in general practice, especially when management and husbandry are poor.**

The condition can affect all species, but appears to be more common in chelonians and chameleons. Organs that may be involved are normally very fragile and include the cloaca, colon, bladder, hemipenis, phallus and oviduct.

Prolapses are normally reported as a secondary complication of an underlying problem. This will generally require investigating before the organ involved is replaced; otherwise there are chances of reoccurrence. The prolapsed organ must also be determined before a treatment plan is decided on.

Any condition that causes constipation or tenesmus, for example, parasitism; increased coelomic pressure, such as obstructions caused by a foreign body, reproductive disease or bladder stones; and hypocalcaemia can lead to a prolapse. The following is a brief list of the organs that will more commonly be found prolapsed, as well as a short description of the clinical signs, diagnosis and treatment in each case.

## **Colon prolapse**

A prolapsed colon can occur in all species. Constipation, intestinal impactions, foreign bodies,

hypocalcaemia, bacterial enteritis and parasitic enteritis have been implicated. Constipation may result from inappropriate substrate or an inadequate enclosure size to stimulate normal defecation.

- **Clinical signs**

Clinical signs include anorexia, dehydration and reduced faecal output. The surface of the prolapsed colon will appear smooth, the colour should be shiny pink and a lumen will be present. In some cases, faecal material can be found inside the lumen.

- **Diagnosis**

The history may record observation of substrate ingestion. Radiograph examination (plain and contrast studies) and/or ultrasonography will aim to find the location of the obstruction. However, a foreign body that is apparent radiographically may be asymptomatic and/or a normal incidental finding. A faecal culture and full parasitological analysis should always be indicated, especially when no abnormalities are reported on the x-rays or ultrasound, to rule out bacterial and parasitic enteritis.

- **Treatment**

In the acute phase, the prolapsed tissue can be easily reduced and managed using a purse string suture or transverse cloacal sutures. When the colon has been exposed for several hours, the tissue becomes oedematous and friable making the procedure more difficult – in some cases a coeliotomy is necessary to apply traction to help reduce the prolapse. In addition, a colopexy may be performed to prevent reoccurrence of the prolapse.

## **Oviduct prolapse**

Females may have the oviduct prolapsed as a result of egg binding or other conditions that cause tenesmus.

- **Clinical signs**

The prolapsed structure is thinwalled and flabby with a lumen similar to the colon, but will not contain faeces. An oviduct prolapse will also be differentiated from a colon prolapse because longitudinal striations (accordionlike) are present on the surface of the oviduct while the colon surface is smooth.

- **Diagnosis**

The history might record signs of mating with a male or, in the case of single individuals, there will be no records of egg laying over the years. Radiograph examination will identify any bound eggs

within the coelomic cavity. Follicular stasis can be identified by ultrasonography.

- **Treatment**

When the oviduct prolapses, it is likely that the suspensory structures have been damaged as well. This is why a coeliotomy to remove the affected portion of the reproductive tract and its accompanying ovary is recommended.

If the contralateral side is left intact, the patient will still be able to reproduce. For reptiles in which reproduction is not a concern, bilateral ovariohysterectomy should be performed to prevent future occurrence.

## **Urinary bladder prolapse**

In most cases, urinary bladder prolapse is the result of cystitis and straining often associated with cystic calculi.

- **Clinical signs**

Signs include anorexia, haematuria, constant straining, cloacal prolapse, and anecdotal reports include rear limb unilateral or bilateral paralysis. A prolapsed urinary bladder will appear as a thin walled and translucent organ with no lumen.

- **Diagnosis**

Cystic calculi can be aided by palpation of the abdomen in amphibians and most lizards. In chelonians, palpation of the bladder is possible with digital palpation of the inguinal fossa with the animal held vertically. Occasionally, digital cloacal examination permits palpation of cloacal or urinary calculi, but the gold standard for detection of urinary calculi is radiography.

- **Treatment**

If a small portion of the bladder is prolapsed, applying a purse string suture will help reduce it. On the other hand, if the exposed tissue appears to be non-viable, it needs to be resected.

An atraumatic clamp is placed across the viable section of tissue, allowing the non-viable tissue to be removed distal to the clamp. A double-layer inverting closure is then placed distal to the clamp, sealing the urinary bladder. The remainder is then replaced through the cloaca and into the coelomic cavity.

If a large portion of bladder is damaged, a coeliotomy may be performed for better exposure and excision of the diseased tissue. The treatment of choice for the removal of urinary calculi is

coeliotomy with cystotomy, however there is a high percentage of reoccurrence. In lizards and frogs, a standard soft tissue approach through the ventral midline is the technique of choice. In tortoises, a plastronotomy approach is used.

## **Copulatory organ prolapse**

Prolapse of the penis, or hemipenis, is most commonly the result of infection, swelling from sex determination probing or traumatic separation during copulation. Other causes include constipation (due to cloacoliths) and neurological dysfunction.

### **• Clinical signs**

An oedematous prolapsed penis will be reported. In many cases the organ will not go back to its original position voluntarily. Constipation and neurological signs can also be reported.

In snakes and lizards, the hemipenis will often have barbs over the surface; in chelonians the distal end of the penis is pointed, with a groove running down the dorsal midline. The hemipenis is paired and positioned caudal to the vent in the tail-base in most reptiles.

### **• Diagnosis**

Diagnosis can be aided by the clinical history, for instance, if the animal has recently been probed or mated with a gravid female. On the other hand, if constipation and anorexia have been reported by the owner, the animal will require further investigation, such as radiographs or ultrasound examination, to rule out the possibility of a cloacolith, bladder stone or intestinal blockage, for example.

### **• Treatment**

The protruding tissue should be cleaned, lubricated and gently replaced into the cloaca with the aid of cotton-tipped applicators. Concentrated sugar solutions, such as honey, may be helpful in decreasing the tissue oedema if the organ is significantly enlarged.

In cases where the prolapse cannot be reduced manually, incising the vent opening laterally on one or both sides will allow it to be enlarged. This will enable the organ to be reduced.

Once this is achieved, a purse string or transverse cloacal suture can prevent the penis from prolapsing again. If a cloacolith or intestinal impactions are responsible for the prolapse, these need to be addressed and a plastronotomy would need to be carried out in chelonians, or a soft tissue approach through the ventral midline in lizards.

If the tissue is badly damaged or necrotic, amputation is indicated. If only one organ is amputated

in species with a hemipenis, the animal is still considered fertile because the opposite site should still be functional.

## **Emergency**

A prolapse should always be treated as an emergency. If a client calls stating his/her pet reptile “has something coming out of its rear end”, the owner should be instructed to bring the pet to the surgery as soon as possible and should also be given instructions to protect the prolapsed organ.

Firstly, the patient should be removed from its enclosure to avoid contact of the prolapsed organ with the vivarium substrate and to prevent damage from other inhabiting pets.

If the animal is very uncomfortable and there is a risk of damaging the organ with sharp nails, both hindlegs should be wrapped until the organ can be safely protected.

Explain to the owner that any solution containing a high concentration of sugar, such as honey, can be used to cover the organ to decrease the swelling and oedema. If the oedema decreases and the owner feels comfortable manipulating the organ, it can be manually reduced until the animal can be seen for a consultation.

If the organ size cannot be reduced by the owner, it should be comfortably wrapped using a clean, damp cloth. If lubricant is available, this can be used to cover the prolapsed structure to prevent further damage during transport.

Preventive measures against prolapse include improving the management and husbandry within the pet’s artificial environment by mimicking its natural environment.

A varied and complete diet with calcium and vitamin supplements will help prevent reproductive and dietary problems while a good preventive medicine programme designed by a veterinarian with experience of exotics will also help.

## **Further reading**

- Mader D (2006). Reptile Medicine and Surgery (2nd edn), Elsevier– Saunders, St Louis.
- Girling S, Raiti P (2004). Manual of Reptiles (2nd edn), BSAVA, Gloucester.
- McArthur S, Wilkinson R and Meyer J (2004). Medicine and Surgery of Tortoises and Turtles, Blackwell Publishing, Oxford.