

# **When The End Is In Sight: Cloacal Organ Prolapses in Chelonians**

by

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Several years ago, I received a phone call from a frantic turtle owner. His beloved pet had suddenly developed a large "pimple" on its rear end, and he wanted to know what to do. He had already attempted to solve the problem by keeping the turtle away from water for several days, thinking that it might be best to let the mass dry out. While his heart was in the right place, his lack of understanding of the problem and his failure to respond correctly nearly resulted in the death of the animal. The turtle had a serious colon prolapse that required surgery to remove the necrotic (dead) tissue and a lengthy course of antibiotic treatment.

Unfortunately, this is not an isolated case. I have occasionally received phone calls or emails from concerned turtle owners with similar stories. I myself have fostered several sick turtles that developed prolapses. I thought it would be valuable to write an article on this topic, describing the different types of cloacal prolapses, their possible causes and prevention, and what emergency measures you, the chelonian owner, can take if your animal prolapses before you can get it to a veterinarian for treatment.

## **Types and Causes of Cloacal Organ Prolapses**

In chelonians, the colon, the urinary bladder, the penis of males, the oviducts and shell glands of females, and the cloaca itself may prolapse, that is, slip from their normal position, move down the cloaca and pass out through the anal vent.

There are a number of potential causes of cloacal prolapses. In most cases, prolapses are the result of an excessive amount of tenesmus (straining) secondary to some underlying medical conditions or inciting event. Animals that are debilitated and have poor muscle tone (as in the case of animals with low calcium status) are particularly predisposed to prolapse an organ if they strain.

## **Penile Prolapse**

Prolapse of the penis, or more accurately stated, the inability to properly retract the penis, is most commonly the result of trauma while the organ is everted for copulation. The trauma may be the result of forced separation, traction during mating, bite wounds from enclosure mates, and abrasions with surfaces. The traumatized tissue can quickly swell making retraction back through the cloaca impossible. Other causes of penile eversion that can lead to injury and the inability to retract the organ include, but are not limited to, constipation, impaction of the cloaca with urates, parasitic infestation, bacterial or fungal infection in or around the penis, and neurological defects in the retractor apparatus or cloacal sphincter muscles.

It is worth noting that mature males occasionally protrude their penis and urinate when excited (e.g., during stressful handling) as well as during normal urination and defecation. Retraction of the penis is under the control of the animal and is not considered a prolapse.

## Oviduct and Shell Gland Prolapse

Females may prolapse the shell glands and oviducts secondary to dystocia (difficulty in laying eggs), salpingitis (inflammation of the oviducts) or other conditions that cause straining such as polyps, tumors, or severe enteritis (inflammation of the intestines), often due to parasitic infestations, or fungal or bacterial infections. Oviductal prolapse can also occur during normal oviposition, although this is the exception.

## Urinary Bladder Prolapse

In most cases, prolapse of the urinary bladder is secondary to straining stimulated by cystitis (inflammation of the urinary bladder), especially associated with cystic urinary calculi. (These urinary stones, the majority of which consist of urate salts, are more common in tortoises than in turtles). Eggs within the bladder have also been implicated in bladder prolapses.

## Colon Prolapse

Prolapse of the colon is generally secondary to bacterial, mycotic, or parasitic enteritis. Constipation and obstipation (complete blockage of the intestinal tract by feces or other matter) are also common causes.

## Cloacal Tissue Prolapse

A moderate, penislike protrusion of cloacal tissue (sometimes referred to as a “clitoral hyperplasia”) may be observed in mature females under certain abnormal circumstances, such as during treatment with oxytocin (to stimulate oviductal contractions) in cases of dystocia, or when extremely debilitated, hypocalcaemic, or edematous (fluid-retaining).

Male and female chelonians may experience cloacal tissue prolapses for any number of other reasons causing straining (e.g., any coelomic-occupying lesion; constipation; cystic calculi; and bacterial, fungal, viral, and parasitic infections of the lower genitourinary and digestive tracts.

## Determining what has prolapsed

Before your vet can determine a treatment plan for your animal, he/she will need to determine what organ has prolapsed.

- A penile prolapse presents as a *solid* tissue mass protruding from the vent. Unlike other organs, the penis does not evert (turn inside out) when it prolapses and has no central lumen (cavity).
- A prolapsed shell gland has unique longitudinal striations (ridges) on the surface. There is a lumen.
- A prolapsed urinary bladder is thin-walled and translucent, and has a lumen. Urine may be needle-aspirated by your vet to provide a definitive diagnosis of a bladder prolapse.
- A prolapsed colon is generally smooth and has a lumen. (See illustration.) In many cases fecal material can be obtained through the lumen, either passed directly or by aspiration through a small catheter inserted into the lumen.
- A cloacal tissue prolapse is generally a solid mass without a lumen. It does not bear the dark pigmentation of penile tissue.



The lumen (arrow) is clearly seen in the prolapsed colon of this male eastern box turtle (*Terrapene carolina carolina*). The turtle experienced repeated colon and penile prolapses of unknown causes. It is now in good health after undergoing a phallectomy (amputation of the penis) and a coloplexy (suturing of the colon to the body wall to hold the colon in place).

## Treatment

Since organs (other than the penis) that prolapse evert as they descend the cloaca, the tissue exposed to the outside environment is actually the interior surface of the organ. Without intervention, any organ that prolapses will soon begin desiccating, leading to severe, often irreversible circulatory and cellular damage. If the vascular supply, particularly the flow of venous blood from the organ, is obstructed, the organ may rapidly swell causing yet further damage. The exposed tissue may be further traumatized from substrate contamination, abrasion with surfaces, and biting and trampling by enclosure mates.

It is vital to take an animal with a prolapse to a qualified reptile veterinarian as quickly as possible (hours count!). However, there are a few emergency measures you can take at home to increase the chances for a successful outcome.

- Holding the animal under the sink, *very gently* flush cool water over the prolapse to remove any debris. Do not wipe the exposed organ; the tissue is delicate and may be easily damaged.
- Do not attempt to reduce (reinsert) the prolapsed tissue; you may cause further damage.
- Put the animal in a clean plastic portable container by itself on wet newspaper. Put the container in a quite, dark room to keep the animal calm if you cannot see the vet right away.
- Consult with your vet on whether he/she wants you to do further home treatment before bringing your animal to the clinic. If the prolapsed tissue is swollen, your vet may recommend that you *very gently* apply a hypertonic solution (paste) of table sugar and water, glycerin, or a water-based lubricating jelly containing glycerin (e.g. K-Y® Jelly, Johnson & Johnson, New Brunswick, NJ) to reduce the edema. (I find these products are best applied with a spoon, being careful not to exert pressure). Since sugar can be irritating, it may not be appropriate in every case. Also, sugar should only be left on briefly (no longer than about 30 minutes) before it is rinsed off. Products like K-Y® Jelly are rarely irritating,

and act as a humectant pulling moisture out of the air and hydrating the underlying tissue. The jelly can be kept on the tissue long-term without ill effect. Do not use honey (as some authors recommend) on a prolapsed organ; the honey may be contaminated with *Clostridium* spores that have the potential to infect the exposed organ.

- In preparing to travel to the vet, you may want to protect the prolapse by “diapering” the animal with plastic food wrap, folding the wrap *loosely* over the rear end, leaving the legs and feet exposed (to keep the claws away from the prolapsed tissue), and taping the ends of the wrap to the carapace (upper shell) and the plastron (lower shell). Do not keep the turtle wrapped up any longer than it takes to transport the turtle to the vet; the low-oxygen environment under the wrap will encourage the growth of pathogenic anaerobic bacteria.