

## Treatment of spectacular dysecdysis in a *Boa constrictor* snake at Lombok Wildlife Park, Nusa Tenggara Barat

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**ABSTRACT:** Lombok Wildlife Park is a conservation institution located in Lombok, Nusa Tenggara Barat, and with specialization for wild animals including snake. This paper reports the treatment of spectacular dysecdysis in a *Boa constrictor* snake. The snake Boly, approximately 1.5 years old with a body weight of 8 ounces, experienced stuck eye caps or spectacular dysecdysis after an incomplete moulting process. There was swelling of the tissue in both eyes, and the boa lost appetite. Treatment was carried out by administering antibiotics and anti-inflammatory drugs for the first 3 days and continued with supporting supplements in the form of iron and intramuscular vitamin B12 for the next 3 days. The swollen tissue in the left eye burst and caused damage to the eye organs, whereas the dried tissue in the right eye was peeled off manually. The snake's appetite has improved again, and it wants to eat on its own.

### Keywords:

eye caps stuck, Lombok Wildlife Park, spectacular dysecdysis, *Boa constrictor*, snake

### ■ INTRODUCTION

The boa snake (*Boa constrictor*) is a snake that can live at an altitude of 0–2,000 m above sea level and in various habitats such as wet, humid, dry tropical and subtropical forests, beaches, savannas, swamps, and bushes (IUCN 2021). Based on an assessment carried out by the International Union for Conservation of Nature (IUCN) in 2014, the *Boa constrictor* was included in the least concern category. Least concern is the species of least concern because it is not considered a focus species for conservation because it is still widely found in the wild. The body size of a boa snake that has been found is 4 m, with the average length of an adult snake being 2-3 m. Female snakes are generally longer than male snakes; however, male snakes have longer tails than females because they have hemipenes (Lindemann 2009).

Boa snakes can live in conservation institutions both ex situ and in situ. Lombok Wildlife Park in Lombok, Nusa Tenggara Barat, is an ex-situ conservation institution that maintains boa snakes. This institution is a place for controlled breeding and/or rescue of plants and animals while maintaining the purity of their species as well as a place for education, exhibition, research, scientific development, a means of protecting and preserving species, and a means of healthy recreation ([lombokwildlifepark.com](http://lombokwildlifepark.com)). Health problems in animal rescue programs are a part of the agency's daily activities. One of the health problems in snakes is skin moulting disorder, commonly known as spectacular dysecdysis, and there is a risk of inflammation of the body scales and conjunctiva

of the eyes (Da Silva *et al.* 2015). This paper reports a case of spectacular dysecdysis in a boa constrictor kept at the Lombok Wildlife Park ex-situ conservation institution, Lombok Regency, Nusa Tenggara Barat (Figure 1).



Figure 1. A *Boa constrictor* snake experiencing spectacular dysecdysis at the ex-situ Lombok Wildlife Park Conservation Institute in Lombok, Nusa Tenggara Barat. (A) Swelling in both eyes; (B) right eye; and (C) left eye appeared to be broken after treatment.

### ■ CASE

**Signalement:** *Boa constrictor* snake named Boly, about 1.5 years old and weighing 800 g. **Anamnesis:** Swelling of both eyes after the snake has finished shedding, and the snake has lost its appetite. **Diagnosis:** Stuck eye caps or spectacular dysecdysis due to incomplete shedding. **Prognosis:** Dubius, if it treated immediately, the chances of healing and not

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recurring are high. **Treatment:** 0.16 ml Roccine® Inj (enrofloxacin) was added to distilled water at a ratio of 1:1 and 1 ml Dexapros Inj® (dexamethasone) intramuscularly for 3 days. Next, the snake was administered Hematodin and Biodin (each 0.5 ml intramuscularly) as supportive therapy for the next 3 days. Boly snakes were bathed daily in warm water and then dried in the sun for 15 minutes. The swelling in the left eye of the Boly snake burst and caused damage to the left eye, whereas the right eye was peeled off manually after drying, the snake's appetite returned, and the snake was ready to eat.

## ■ RESULTS AND DISCUSSION

Snake eyes are different from those of other reptiles, and snakes have a transparent spectacle that protects the cornea. Snake eyes do not have lacrimal glands but have well-developed Harderian glands that secrete tears into the subspectacular space. The subspectacular space separates the spectacle and cornea (Hausmann *et al.* 2013, Govendan & Kurniawan 2020). Spectacular dysecdysis or a stuck eye cap occurs because of incomplete shedding of the eye. Shedding failures are common in snakes and lizards. Failure to shed can cause secondary infections caused by bacteria and fungi (Harkewicz 2002).

Enrofloxacin is a broad-spectrum fluoroquinolone antibiotic which has a broad spectrum and is widely used in animal medicine. Enrofloxacin kills bacteria by inhibiting bacterial DNA gyrase which prevents supercoiling and DNA synthesis (Plumb 2011). Enrofloxacin is widely used for the treatment of exotic animals because it is safe and capable of combating various pathogens. Additionally, enrofloxacin is less nephrotoxic than aminoglycoside antibiotics in reptiles. The use of enrofloxacin by injection can cause tissue damage if more than 1 ml is administered and it is recommended to be injected at several points with a maximum administration of 0.5 ml (Waxman *et al.* 2014). Dexamethasone is administered as an anti-inflammatory agent to prevent and treat the inflammation that occurs in soft tissues (Beam *et al.* 2022).

Hematodin functions as a multivitamin and helps the process of regenerating red blood cells, while biodin which contains ATP, aspartate, selenite and vitamin B12 is given to increase energy and increase metabolism (Naomi *et al.* 2019; Prudenta *et al.* 2021). The simultaneous administration of hematodin and biodin preparations is aimed at increasing the appetite and metabolic processes of snakes.

Snakes are bathed to restore moisture, while drying the snake aims to provide the snake with sunlight for metabolic processes (Doneley *et al.* 2018). According to Hausmann *et al.* (2013), the recommended treatment for spectacular dysecdysis or stuck eye caps is to wet and moisten the spectacle parts using 0.9% NaCl, lubricating eye drops, acetyl-

cysteine, or soaking the snake completely. Once sufficiently hydrated, the retained spectacle can be removed manually using a damp cotton bud.

## ■ CONCLUSION

The treatment of spectacular dysecdysis in a boa snake (*Boa constrictor*) at the Lombok Wildlife Park ex situ conservation institute provided a fairly good healing response. Although the eyes of the boa snake did not change, the appetite of the snake improved.

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