

## A CASE OF BLISTER DISEASE TO BOA CONSTRICTOR

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### **Abstract**

*Blister disease is a common condition in reptiles due to poor environmental management – that is, housing the reptile in overly-moist or dirty surroundings. It is also known as vesicular dermatitis. Later, these scales become swollen and infected by opportunistic bacteria (*Pseudomonas* spp.). Small reptiles or those with weakened immune system (either from previous illness, malnutrition or stress) can go downhill rapidly and die very fast from blister disease. This report describes a diagnostic and treatment strategy for an infectious dermatitis in a boa (*Boa constrictor*).*

**Key words:** *Blister disease, Boa, Pseudomonas, reptiles*

### **INTRODUCTION**

Naturally, boas can get a number of different health problems. We now wish to address the health problems that are most commonly encountered in captivity (Elliott, 2007, Harkewicz, 2001, White et al., 2011).

One of the most common reasons captive reptiles are presented to a veterinarian is for dermatologic disease (Harkewicz, 2001, White et al, 2011).

The most important cause for dermatopathies is inadequate management, especially species inappropriate temperature and humidity (Hatt 2010).

Blister disease (it is also known as vesicular dermatitis, scale rot, or necrotizing dermatitis) is a common condition in reptiles due to poor environmental management – that is, housing the reptile in overly-moist or dirty surroundings (Elliott, 2007, Mark and Thomas, 2009). As the animal is forced to lie on damp substrate saturated with rotting food or feces and urates, the skin becomes infected. Watery blisters are the first sign. Later, these scales become swollen and infected by opportunistic bacteria (*Pseudomonas* spp.). The infection may pass into the body causing septicemia and passing to internal organs.

Small reptiles or those with weakened immune system (either from previous illness, malnutrition, environmental or psychological stresses and other infections) can go downhill rapidly and die very fast from blister disease (Elliott, 2007, Paterson, 2006, White et al., 2011).

The skin may rot away from the initial blister, leaving the body more susceptible to bacterial and fungal invasion and thermal burns (Hatt, 2010, White et al, 2011).

This report describes a diagnostic and treatment strategy for an infectious dermatitis in a boa (*Boa constrictor*).

## **MATERIALS AND METHODS**

One young snake (a 4-month-old male *Boa constrictor*) was submitted for clinical examination. About 4 days present clinical signs that included restless movements, anorexia, changes of skin colors into dark nuances and vesicular formation disposed in the third quarter of the body. The first clinical sign observed and described the owner was a pink to red appearance of the bottom most scales. The snake were housed individually in primary enclosures standard 40 Litre aquaria with screen lids. Water was provided in plastic water bowls. Light was provided by fluorescent light located in room ceiling with a 12 hour light/dark cycle. The ambient room temperature range was 28-32<sup>0</sup>C, with the relative humidity of 60-80%. The snake was feed two juvenile mice weekly. Bedding consisted whole paper towels, this is changed every two weeks and were wet.

For the diagnosis, using a sterile syringe has been extract a reddish liquid from vesicle, and collected skin samples from infected area on sterile cotton swab previously soaked in a sterile saline solution were submitted for bacteriological (including test for susceptibility to antibiotics) and cytological investigations. Also were collected samples was inoculated on to sheep blood agar, MacConkey agar and Columbia agar. The plates were incubated at 37<sup>0</sup>C, aerobically, for 72 hour, immediately after inoculation. Aerobic bacteria were characterized using standard phenotypic and biochemical properties.

Diagnosis is based from cultural and sensitivity taken aseptically from blister fluid is essential to isolate the pathogen involved (Paterson 2006).

## RESULTS

Cultural examination of the fluid was positive for *Pseudomonas aeruginosa*. Cytological examination did reveal the presence of increased numbers of Gram negative bacillary bacterial cells.

After susceptibility test established a treatment for seven days, use enrofloxacin 5 mg/kg IM q 24 houer (Baytril<sup>®</sup>5%, Bayern Animal Health GmbH, Germany).

The blisters or inflammation should be treated as above and the enclosure thoroughly cleaned out of all residues. If the condition is the result of toxic substrates, the material not only needs to be removed and discarded, but the inside surfaces of the enclosure must be washed out with hot soapy water to remove all residues from the oils in the substrate. After thorough rinsing and disinfection, the enclosure may be outfitted with a proper substrate for the duration of the healing period.

Clinical condition of snake after therapy returned to normal.

## CONCLUSIONS

Most of the lesions are on the ventral or underside of the animal which is why it is easy to miss. These fluid filled blisters may become infected with aggressive opportunistic bacteria, and if not treated promptly may lead to severe tissue (skin) damage, septicemia (blood poisoning caused by bacteria or their toxins) and death. You must examine your pet snake regularly in order to catch problems.

Poor condition may have created a suitable microenvironment for opportunistic *Pseudomonas* infection.

Early treatment is essential and the animal must be seen by a specialist vet. Other conditions can present in ways which may be mistaken for blister disease and so it is very important that the diagnosis is made correctly. When the treatment has been completed and the snake is well, it is very important that the environment is kept clean and dry at all times.

At the first suspicion of this disease, you must seek veterinary help.

Naturally, a proper examination of a sick boa requires a vet, who then prescribes the necessary medications and conducts those treatment methods that are beyond competence of the snake keepers.

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