

SOME EXPERIENCES IN THE USE OF F10 IN THE TREATMENT OF REPTILES

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Introduction

For the past several years we have been using a variety of the F10 products in our clinic. The BEAH is a private, special interest clinic based on the premises of the Onderstepoort Veterinary Academic Hospital.

The case load of the BEAH consists entirely of birds and exotic animals including reptiles. Both first opinion and referral cases are seen.

Biosecurity in the hospital

We use the F10SC Veterinary Disinfectant (F10SC) and F10SCXD Veterinary Disinfectant/Cleanser (F10SCXD) products for general biosecurity in the clinic. F10SC is used at a 1:250 concentration to clean all cages, bowls and cage equipment. We have found this product to be safe and non-irritant when used in reptile enclosures. Although we have not undertaken any formal testing ourselves we are kept informed of the ongoing testing regimen carried out by Health and Hygiene and we are aware that the OVAH where F10 products are used throughout carry out regular microbiological surveys. Since using F10 products we have not had a cross infection incident in our reptile unit. F10SC is also used regularly in a commercial fogger to minimise airborne contamination and to penetrate small areas hard to hand clean. All hospital rooms are fogged weekly while 1:250 F10SCXD is used on our floors daily.

Viral challenges

A daily cleaning and fogging protocol as recommended by the Health and Hygiene personnel was used in a closed collection of indigenous reptiles where there had been a reovirus outbreak. The diagnosis was made on Post Mortem including Electron Microscopy.

Very little was known about this specific virus except that it affected vipers and colubrids severely while boids housed in the same facility never showed any signs of illness. The clinical signs varied from acute pneumonia, lung haemorrhage and death to dysecdysis, regurgitation, weightloss and increased levels of aggression.

The recommended routine included washing of all cage furniture in 1:250 F10SC initially and weekly thereafter. Cage furniture was labelled and used strictly in its own cage (ie no bowls/hides were moved from one cage to another).

All handling equipment including hook and grab sticks were wiped down and dipped into a 1:250 F10SC solution and allowed to air dry. This cleaning protocol was followed each time the equipment was used. The handling equipment was manufactured from anodised aluminium and no staining of the metal was noted.

Daily room fogging for 10-15 minutes with 1:250 F10SC in a commercial fogger unit was performed for 6 weeks. No reptiles showed discomfort or respiratory distress during the fogging.

No new infections were noted after the strict hygiene protocol was begun although several individuals continued to demonstrate dysecdysis and increased levels of aggression.

Nebulising cases with bacterial pneumonia

Bacterial pneumonia is an extremely common condition of tropical snakes such as Burmese Pythons. Most cases are precipitated by incorrect husbandry including inadequate warmth and humidity. Commonly isolated bacteria include *Proteus mirabilis*, *Pseudomonas aeruginosa* and *Aeromonas spp.*

Nebulisation is a valuable adjunctive therapy in these cases and F10SC at a 1:250 concentration is used along with antibiotics and mucolytics for twice daily treatment. Each nebulisation session lasts for 10-15 minutes.



Burmese Python with purulent nasal discharge. Bacterial pneumonia, severe



Nebulising a Burmese Python

Soak therapy in exudative dermatitis

Scale rot or "Blister disease" is an exudative dermatitis of the ventral body scales associated with septicaemia and/or filthy, damp caging. We use topically 1:500 F10SC as a 30min soak before dressing replacement in these cases. No adverse effects have been seen even when therapy was extended to twice weekly soaks for 5-6 weeks. Severe cases are treated with systemic antibiotics.

Daily soaks for up to two weeks have been used in patients with large, superficial lesions.





Albino Burmese Python with reddening and blistering of the ventral and lateral body wall scales



Daily F10 soaks for Burmese Python

Burn wounds

Burn wounds caused by contact with overheated cage warming equipment are unfortunately a common injury in captive reptiles. Mild burn wounds as well as superficial traumatic injuries can be treated with F10 Germicidal Barrier Ointment.



Corn Snake 2 weeks into treatment for severe ventral burn wounds caused by malfunctioning heating pad.



Corn Snake 8 weeks into treatment

Fungal dermatitis

Fungal dermatitis is occasionally seen in reptiles. Although we have found it necessary to use systemic antifungals in severe cases, F10 Germicidal Barrier Ointment can be effective in early cases of this condition.



Severe fungal dermatitis in a juvenile iguana

Bite wounds

The feeding of live prey rodents to snakes should be prevented at all costs. Rats and mice can inflict severe, even fatal wounds on reptiles if left in the cage with the snake. Once again, F10 Germicidal Barrier Ointment has been used successfully to protect and prevent secondary infections of these wounds.

F10SC is regularly used as a general wound irrigation solution. The 1:250 concentration can easily be drawn into a 20ml syringe. An intravenous catheter, generally 20g is then attached to the syringe for irrigation. This small bore catheter allows sufficient pressure to be generated to flush off superficial wound contaminants. By the time of presentation, most reptile wounds are grossly contaminated and a prolonged debridement phase can be expected.

The wounds will often develop a dark, leathery necrotic surface layer under which granulation is occurring. At this stage we find the F10 Germicidal Barrier Ointment more suitable.



Rat bite wound in a Boa Constrictor, ribs and vertebrae are exposed

Nasal flushing

Nasal flushing has been performed in a Boa Constrictor with purulent exudate blocking the external nares after resolution of a purulent bacterial pneumonia. The visible exudate was manually removed and a 1:500 F10SC solution used to gently flush from the nares to the mouth. No adverse reaction was seen and the condition did not recur once the dried exudate was removed.

A new combination

F10 Germicidal Wound Spray with Insecticide is a product we have just started using. This product has been successfully used on tortoises suffering from dog bite wounds. Secondary fly strike is always a risk with these cases as the injuries are often extensive and the patients need outdoor time to encourage feeding behaviour and general health.

This F10 product has been used on superficial wounds as well as on the dressings covering the severe wounds. To date the use of this product seems encouraging.

Conclusion

In conclusion, we find F10 products to be an invaluable addition to our biosecurity and treatment arsenal. The safety and ease of use of these products make them easy to use in multiple situations.

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