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Chapter 10: Medications

In 1 collection

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[1]VulPro

1 *Works for me* This protocol is published without a DOI.

VulPro

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ABSTRACT

This protocol provides information about medications for vulture rehabilitation and how to calculate drug dosage.

ATTACHMENTS

Vulture_Rehabilitation_Manual_Version_2.0_.pdf

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GUIDELINES

Below is a list of the drugs most frequently used by the authors for vulture rehabilitation. The dosages listed below are those used and recommended based on our experience. However, it is always important to consult with your veterinarian. In addition to this, always check the information insert in the drug's package to confirm the dosage recommended by the manufacturer (as on occasions the same drug may be available at different concentrations). Medications available in your region may not be the same as in South Africa and drug trade names and concentrations will vary. **Always consult your veterinarian!**

Some facilities deworm their vultures as a matter of routine. We recommend testing birds on admission and only deworming a vulture if it is suffering from an overwhelming burden of parasites. Wild animals typically carry a low level of parasites and build up 'resilience' towards them. They can cope with a low level. On occasion, if this burden is removed by deworming, animals can become immunologically 'naïve' and future parasite infections pose a problem.

Use of Antibiotics

The decision to treat with systemic antibiotics is not to be taken lightly. Development of antibiotic resistant bacteria is always a concern. For this reason, antibiotics should always be used judiciously. In ideal circumstances and with ideal resources, a wild vulture presenting for rehabilitation should have blood collected for a complete blood count (CBC) at minimum. See Chapter 8 for CBC reference ranges for various African vulture species. A white blood cell count greater than the upper limit of the reference range may warrant treatment with antibiotics. However, in many rehabilitation situations, performing a CBC may not be practical or possible. In these cases, consultation with a veterinarian is recommended.

Similarly, the use of antibiotics in wound treatment should ideally be informed by the collection of a swab from the wound which is submitted to a lab for bacterial culture and antibiotic sensitivity testing. When not practical or possible, the following should be considered in deciding whether or not systemic antibiotic treatment should be used in wound treatment: cause of the wound and age of the wound (if known), depth, surface area, and body part affected, gross contamination of the wound, and overt evidence of infection (increased warmth, redness, swelling, and/or discharge such as pus).

With the above-mentioned considerations in mind, there are certain conditions in which antibiotic treatment is always warranted:

- Compound (open) bone fractures
- Soft tissue wounds that expose bone, tendon, and/or ligament
- Wounds that are the result of an animal bite
- Severe bumble-foot (See Chapter 3)
- Severe electrical burns that require removal of necrotic tissue
- Osteomyelitis, as determined by radiography or appearance of exposed bone
- Upper respiratory infections
- Whenever more than one dose of dexamethasone is given [generally for treatment of seizures]

ANTIMICROBIAL AGENTS				
AGENT (TRADENAME)	**ROUTE**	**DOSAGE**	**INTERVAL**	**INDICATIONS**
Amoxicilin/ Clavulanate (Synulox®)	IM	125 mg/kg	1 x / day. For at least 5 days.	A good, broad-spectrum, first-line choice. Used for a wide variety of infections including open wounds.
Enrofloxacin (Baytril®)	IM	15 mg/kg	1 x / day. For at least 5 days.	A second-generation fluoroquinolone – this drug should not be reached off the shelf readily. Broad-spectrum. Useful for septicaemia, respiratory infections. Do not use in chicks.
Florfenicol (Nuflor®)	IM	0,17 mg/kg	1 x / day. Every 3 days for at least 3 treatments	Broad-spectrum Chloramphenicol derivative. Effective against respiratory tract infections, osteomyelitis (bone infection), pododermatitis (bumblefoot) etc.
Ciprofloxacin (Cipro®)	PO (oral)	50 mg/kg	1 x / day. 5-14 days	In combination with Clindamycin for open bone fractures
Clindamycin	PO	150 mg/kg	1 x / day. 5-14 days	In combination with Ciprofloxacin for open bone fractures
Tobramycin (Tobrex collyrium)	Topical (eye drops)	2-3 drops per eye	1 x / day. 5-7 days	Eye ulcers and infections
Ofloxacin (Exocin®)	Topical (eye drops)	2-3 drops per eye	3-5 x / day. For at least 5 days.	Eye infections

NSAIDs: NON-STEROIDAL ANTI-INFLAMMATORY DRUGS				
AGENT (TRADENAME)	**ROUTE**	**DOSAGE**	**INTERVAL**	**INDICATIONS**
Meloxicam (Metacam®, Mobic®)	IM	1 mg/Kg	1 x / day. Up to 3 days.	For pain and inflammation

ANALGESIC AGENTS				
AGENT	**ROUTE**	**DOSAGE**	**INTERVAL**	**INDICATIONS**
Butorphanol	IM	1 mg/Kg	1 dose per day. Can repeat daily as long as required.	For pain (fractures, large wounds, electrical burns)

STEROID AGENTS			
AGENT	**ROUTE**	**DOSAGE AND INTERVAL**	**INDICATIONS**
Dexamethasone	IM	4mg/kg (day 1) 2mg/kg (day 2) 1mg/kg (day 3) 0.5mg/kg (day 4) 0.5mg/kg (day 5) 0.5mg/kg (day 6)	For shock/trauma and seizures. Always in combination with antimicrobial.
Hydrocortisone (Cortisol®)	IV, IM	consult with your vet as this depends on the frequency and strength of seizures	Seizures only and ONLY if the seizures are severe and only on its own without any other medication

ANTIPARASITIC AGENTS				
AGENT	**ROUTE**	**DOSAGE**	**INTERVAL**	**INDICATIONS**
Ivermectin	PO, SC, IM	0.2 mg/kg	Once. Can repeat in 10-15 days	De-wormer
Carbaryl (Karbadust®)	Topical		As needed	Feather lice, mites, flat flies, and other ectoparasites

MISCELLANEOUS AGENTS				
AGENT	**ROUTE**	**DOSAGE**	**INTERVAL**	**INDICATIONS**
Ca-EDTA	IM	35 mg/kg	2 x / day (every 12 h) for 5 days – again – do you blood test to assess	Lead poisoning
Propentofylline	PO	5 mg/kg	1 x / day up to 10-20 days.	Wing-tip oedema after electrocutions

MINERAL SUPPORT AGENTS				
AGENT (TRADENAME)	**ROUTE**	**DOSAGE**	**INTERVAL**	**INDICATIONS**
Vitamin B12 (Catasol)	IM, SC, PO	0.5 mg/kg	Once, can repeat in 7 days.	To aid with poisoning and recovery. Also post-electrocution to protect the nerves
Calcium 10% solution	IM	1 ml/kg	Daily supplement	Hypocalcaemia, lead poisoning

EMERGENCIES				
AGENT	**ROUTE**	**DOSAGE**	**INTERVAL**	**INDICATIONS**
Atropine (Atropen®)	Half dose IV, half dose IM	2 mg/kg plus 2 PAM at 25 mg/kg	Repeated as necessary according to clinical response, typically every 2-4 hours.	Organophosphate poisoning. Bradycardia (slow heart rate) and cardiorespiratory arrest

SAFETY WARNINGS

The only vulture safe NSAID is Meloxicam (trade names Mobic, Metacam or Petcam)! Do not use ANY other NSAID. Research has shown all other tested NSAIDs to be toxic to vultures.

ABSTRACT

This protocol provides information about medications for vulture rehabilitation and how to calculate drug dosage.

How to calculate volume of the drug

1 Calculate the dose required by multiplying the required dose rate (mg/kg) by the bird's weight (kg). This gives you the dose required in mg.

2 To calculate the volume of drug required, you need to divide this value by the drug concentration (mg/ml).

For example:
Drug dosage 20 mg/kg Bird weight 10 kg Concentration 50 mg/mL

20 x 10 = 200 mg. This is the dose of drug a 10k g bird must receive.

200 / 50 = 4ml. This is the volume of drug to be administered.