Oct 19, 2020

Chapter 4: Broken bones and dislocations

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 describes how to treat broken bones and dislocations in vultures.

ATTACHMENTS

Vulture_Rehabilitation_Manual_Version_2.0_.pdf

PROTOCOL CITATION

Kerri Wolter 2020. Chapter 4: Broken bones and dislocations. **protocols.io** https://protocols.io/view/chapter-4-broken-bones-and-dislocations-bmjbk4in

COLLECTIONS

Vulture Rehabilitation Manual

KEYWORDS

vultures, vulture rehabiliation, broken bones, dislocations, wing wraps, upper wing fractures

CREATED

Sep 20, 2020

LAST MODIFIED

Oct 19, 2020

OWNERSHIP HISTORY

Sep 20, 2020	Emily Hasser	Cornell University
Oct 01, 2020	Kerri Wolter	

PROTOCOL INTEGER ID

42307

PARENT PROTOCOLS

Part of collection
Vulture Rehabilitation Manual

ATTACHMENTS

Vulture_Rehabilitation_Manual_Version_2.0_.pdf

GUIDELINES

If the skin is broken over any wound, it is highly likely that the underlying tissues will be infected. If this is associated with a broken bone, it is referred to as a compound fracture. If bone and/or tendon is exposed, it is critical to keep the bone and tendon moist. If the bone and tendon dry out, the limb will not be able to be saved. If the compound fracture is fresh and the bone and tendon are still moist, there is a chance the wing can be pinned and saved. In this case, the bird needs to get to an avian veterinarian as soon as possible. If a delay in treatment is unavoidable, then keep the wound moist and commence fluid therapy, antibiotics and pain relief. Even if the bones and tendons are dry, urgent veterinary intervention will still be necessary, although it is unlikely the wing will be saved.

Published release rates from the Minnesota Raptor Research Institute state (1993) the following data:

- o 35% chance of release if the skin is closed
- o 15% chance of release if the skin is open

If the triage (initial assessment of any casualty case) clinician suspects any break or dislocation, then the bird must be presented to an experienced avian vet as a matter of urgency. The bird will need to be stabilised with fluid therapy, pain relief and antibiotics. A diagnosis will typically be made with an X-ray, usually carried out under anaesthetic, and the fracture will need to be initially stabilized (e.g. support bandage) prior to surgical treatment, which typically occurs the following day. However, each case should always be considered on its own merits.

If the bird is tripping on its own wing, then either the tips of the primary feathers on each wing need to be taped together to keep it up off the floor, or the wing needs to be strapped against the body. Stabilizing the wing against the body, using the body as a splint, helps to prevent movement and hence reduces pain, but must be done in a way to avoid excessive pressure around the body. The wing should be strapped in such a way that the bird's breathing is not compromised, nor that excessive pressure is applied on the propatagium (the tendinous leading edge of the wing) which can cause localised loss of blood supply, with resultant loss of wing function.

Key Points for treatment

All trauma cases receive fluid therapy.

All open fractures should be treated with antibiotics (Nuflor). If closed, assess before giving antibiotics.

Pain relief (e.g. meloxicam) is only given after the bird is rehydrated, as if given to a dehydrated patient the drug can cause kidney damage.

ABSTRACT

This protocol describes how to treat broken bones and dislocations in vultures.

Wing wraps

1 When deciding which wrap to use, consider the location of the fracture. The function of wing wraps is to stabilize the joints on either side of the fracture. Therefore, if a fracture occurs in the upper part of the wing (humerus, shoulder, or pectoral girdle: scapula, clavicle and coracoid) the wing will need to be secured to the body to stabilize the shoulder joint. If the break is more distal, towards the tip of the wing, then a body wrap is not necessary.

Upper wing fractures: body wrap

2 The most common fracture in flighted birds, including vultures, is to the humerus (upper arm/wing). Below is a step-by-step guide to applying a wing bandage for fractures in the upper wing and shoulder.

3 Unravel and re-roll your bandage (we recommend VetWrap) prior to starting so you don't have to place pressure on the wing when wrapping, making the wrap unnecessarily tight.

4 Start with the wing in an anatomically correct, folded position. Gently place the wrap under the wing, just below the

bend in the wrist joint.

5 Fold the loose end over the wing just behind the carpus.

6 Pass over the loose end to secure it.

7 Pass the bandage over the vulture's back, heading caudally (towards the tail end).

8 Bring the bandage under the flight feathers of the opposite wing and in front of the opposite leg.

9 Bring the bandage between the legs and behind the other leg as you bring the bandage back toward the injured wing.

It is important at this point to check that the bandage does not cover the vent and check the tightness of bandage around the body. It should be tight enough to remain in place on the body, but not so tight that it could restrict breathing.

10 Bring the bandage over the distal section of the wing.

11 Direct the bandage cranially (towards the head) as you bring the bandage over the vulture's back.

12 Bring the bandage over the shoulder / clavicle but under the opposite wing.

13 Bring the bandage back to the front of the bird and over the sternum.

It is important here to try and not restrict the crop, or place the bandage too high on the neck as to rub on skin or restrict breathing and/or eating. Try to get the bandage to lay flat just under the crop.

14 Bring the bandage back over the injured wing, directed caudally (towards the tail end)

15 Secure and finish the bandage over the vulture's back.

16 Secure/knot the loose end as best as possible.

17 The injured wing should now be immobilized. Check that the wing can't be easily flapped up. Ensure the wing is in an anatomically natural position. If the wing is over-flexed the primary feathers will be pointing upwards. The bandage should not be too loose or too tight. The opposite wing should be free to flap and fully extend. Ensure the bandage is not lying over the crop or vent.

Dislocations

18 Dislocations are serious injuries with a poor chance of return to normal flight. The most common joint to be affected is the elbow and/or shoulder. On occasions, there may be a loss of circulation. **It is important to check the temperature of the distal limb.** You can suspect a loss of circulation when the tissue feels cold. Any such bird must be presented to a suitably experienced avian vet as soon as possible. The longer a joint remains dislocated, the less likely the bird is to fully recover. **Immediate action is required.** Dislocations often have a poorer prognosis than broken bones.