# Animal bites

## *Executive summary*

## Introduction

Patients may present with bites from other people as well as a number of different animals. The most common sources include dogs, monkeys and snakes.

All bites can be associated with bacterial infections – often with very virulent bacteria. Human bites, then cat bites, are the most likely to lead to serious infections. Mammal bites raise the possibility of exposure to rabies. Snake bites may also be venomous (but up to 2/3 of all bites contain no venom).

### Target users

* Doctors
* Nurses

### Target area of use

* Outpatients
* Ward

### Key areas of focus / New additions / Changes

This guidelines summarises in clinical format the management of animal bites, including human, other mammals and snake bites. There are formal SOPs (SOP-CLS-009 and SOP-CLS-020) giving more detail about how to manage rabies-prone exposures and snake bites.

## Limitations

We do not have rabies immunoglobulin available. There is no anti-venom manufactured for neurotoxic snake bites in this region.

## Presenting symptoms and signs

The history is very important. What animal bit the patient? What was happening at the time? Was the bite unprovoked or was there something that triggered the bite? If it was unprovoked, was there any other indication that the animal was unwell or mad? Does the animal belong to someone? Has it been vaccinated? Has the patient been vaccinated against rabies?

For snake bites, did they see the snake? What did it look like?

Beware that traditional healers often diagnose swollen legs as being due to snake bite even when there is no history of this. They then “remove the fangs,” reinforcing their diagnosis. Patients who later present to a clinic will report that they were bitten by a snake, but on further questioning cannot remember when this happened.

For all patients with bites, ask what treatment has been given so far. How long ago did the bite happen?

## Examination findings

Look at the bite. Is it deep? Which part of the body is it on? Does it already look infected?

Check the observations (GCS, HR, BP, RR, O2 saturations) and look at the general state of the patient.

For snake bites, look for signs of envenomation – local swelling, tender lymph nodes, bleeding, signs of shock (cold, cyanosis, sweating, reduced GCS) and signs of neurotoxicity (blurred vision, heavy eyes, drowsiness, shortness of breath, restlessness).

## Investigations

No investigations are needed for mammal bites.

For snake bites, with signs of envenomation, check FBC, blood film, INR, APTT. Also put 2 ml blood in a clean dry glass tube and leave it for 20 minutes, then look for clotting.

## Management

### Mammal (including human) bites

For bites with a risk of rabies exposure, which present acutely, wash the wound with soap and water for at least 15 minutes. If it looks dirty, scrub away the dirt with a brush. Apply iodine or 40-70% alcohol to the wound and dress it with a sterile dressing.

**Never** suture an animal bite.

Give tetanus toxoid and start antibiotics – co-amoxiclav is the best choice. Prescribe by amoxicillin dose (30 mg/kg up to 500 mg TDS – where the dose of amoxicillin is greater than 250 mg use 1 co-amoxiclav tablet and make the rest of the dose up with amoxicillin tablets). Alternatives include doxycycline 100 mg BD and metronidazole 500 mg TDS (non-pregnant adults only), ceftriaxone 80 mg/kg OD or ciprofloxacin 20 mg/kg up to 500 mg BD and clindamycin 10 mg/kg up to 450 mg TDS. All courses of antibiotics are for 5 days.

Where there is concern about rabies, consider the possibility of rabies vaccine. Patients must pay the full cost of this. See SOP-CLS-009. Rabies vaccine will only be effective if given within 72 hours of the bite. We do not have access to human rabies immunoglobulin, so if a patient has a high risk bite, especially on a proximal site of the body, they would need to travel immediately to Dakar. High risk bites are those where carnivore saliva has contacted the mucous membranes, has entered a transdermal bite or has been licked onto broken skin.

### Snake bites

Management is very variable depending on whether the bite contained venom or not and on the type of snake that bit the patient.

If there is evidence of hypovolaemia or shock, manage the airway, breathing and circulation as necessary. Start fluid resuscitation as soon as possible.

Give paracetamol and / or codeine if necessary for pain.

If there is evidence of bleeding, organize a whole blood transfusion.

Clean all wounds with antiseptic – alcohol, potassium permanganate, iodine or GV are all suitable. Immobilise the limb in a comfortable position level with the patient (neither elevate nor hold it down).

Where there is local tissue damage or swelling:

* Do not open blisters.
* If there is necrotic tissue, debride it.
* Watch for signs of compartment syndrome and arrange surgical intervention if present.
* Treat with cloxacillin if there are signs of bacterial wound infection.

If the bite was from a puff adder or a spitting cobra with signs of envenomation, then anti-venom is indicated and should be available for staff and staff relatives only. Make it up as instructed, dilute it in normal saline and infuse over 30 minutes. Admit any patient given anti-venom to the ward. Monitor the patient closely for evidence of anti-venom reaction including anaphylaxis, fever and late reactions. See SOP-CLS-020 for more details on management of snake bite.

There is no anti-venom available for bites by mambas or neurotoxic biting cobras.

## Key Issues for Nursing care

## Keep the patient calm.

Wash the wound as described above. Dress the wound only after it has been reviewed by a doctor (or take a photograph before dressing it, if you are away from Fajara and need to dress it before transferring the patient there).

## References

World Health Organisation 2010. Guidelines for the Prevention and Clinical Management of Snakebite in Africa.

World Health Organisation, ‘Rabies: Local treatment of wounds’ published 2012 cited 24/07/12 found at: <http://www.who.int/rabies/vaccines/treatment_wound/en/index.html>

World Health Organisation. Rabies: Guide to post exposure prophylaxis, published WHO 2012, cited 25/07/12, found at: <http://www.who.int/rabies/human/postexp/en/index.html>

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