

26. Bites (Animal, Human, Snakes)

| Animal Bites If rabies is a concern, scrub the wound with soap and water , then rinse. The use of antibiotics in patients with animal bites is controversial , and some studies have shown little benefit . However, pre-emptive early antimicrobial therapy for 3–5 days is recommended for patients who; <ul style="list-style-type: none">are immunocompromised;are asplenic;have advanced liver disease;have pre-existing or resultant oedema of the affected area;have moderate to severe injuries, especially to the hand or face; orhave injuries that may have penetrated the periosteum or joint capsule ALL Human bites should receive; <ul style="list-style-type: none">prophylactic antibioticsconsider post-exposure prophylaxis for HIV within 72hrs. The risk associated with bite injuries has not been quantified. The victim is usually at low risk unless the biter’s saliva is contaminated with blood. The risk is greater to the biter if blood is drawn from the victim’s wound because of exposure to mucous membranes.Hepatitis B vaccine preferably ≤ 24 hours if not previously immunized Treatment: DO NOT SUTURE ANIMAL AND HUMAN BITES . The above wounds should be irrigated copiously, dressed, left open to drain, and examined daily to detect signs of infection. During the first few days after injury, elevation of the injured body part, especially if swollen, accelerates healing. This should be accomplished using a passive method (a sling for outpatients or a tubular stockinet and an intravenous pole for inpatients). ALL infected wounds should be treated . If no signs of infection, delayed primary closure may be done 72 hours after the injury . | Antibiotics Amoxicillin/Clavulanate 1gm BD x 5-7 days In Penicillin Allergic Patients: Clindamycin 300 mg PO QID/600 mg IV TDS OR Azithromycin 500mg PO OD for 3 days PLUS Tetanus Toxoid 0.5mg IM | | | | | | | | | | | | | | | | | | | |
|---|---|--|------------------------------------|-----------|------------------------------------|------|--|---|----------------|-----------------|----------------------|-----|----|-----|-----|-----------|-------------------------------------|----|------------------------------------|----|
| | <table><tr><th rowspan="2">Previous doses of Adsorbed Tetanus Toxoid</th><th colspan="2">Clean and minor wounds</th><th colspan="2">All other wounds</th></tr><tr><th>Tetanus toxoid</th><th>TIG</th><th>Tetanus toxoid</th><th>TIG</th></tr><tr><td>< 3 doses or unknown</td><td>Yes</td><td>No</td><td>Yes</td><td>Yes</td></tr><tr><td>≥ 3 doses</td><td>Only if last dose given ≥10 yrs ago</td><td>No</td><td>Only if last dose given ≥5 yrs ago</td><td>No</td></tr></table> | Previous doses of Adsorbed Tetanus Toxoid | Clean and minor wounds | | All other wounds | | Tetanus toxoid | TIG | Tetanus toxoid | TIG | < 3 doses or unknown | Yes | No | Yes | Yes | ≥ 3 doses | Only if last dose given ≥10 yrs ago | No | Only if last dose given ≥5 yrs ago | No |
| Previous doses of Adsorbed Tetanus Toxoid | Clean and minor wounds | | All other wounds | | | | | | | | | | | | | | | | | |
| | Tetanus toxoid | TIG | Tetanus toxoid | TIG | | | | | | | | | | | | | | | | |
| < 3 doses or unknown | Yes | No | Yes | Yes | | | | | | | | | | | | | | | | |
| ≥ 3 doses | Only if last dose given ≥10 yrs ago | No | Only if last dose given ≥5 yrs ago | No | | | | | | | | | | | | | | | | |
| | Rabies Prophylaxis <table><tr><th>Rabies Prophylaxis</th><th>Pre-EP</th><th>No Pre-EP</th></tr><tr><td>Immunoglobulin (Wound Site)</td><td>None</td><td>Human Ig - 20U/Kg OR Equine Ig - 40U/Kg</td></tr><tr><td>Vaccine (1 mL) (Deltoid or AL thigh)</td><td>Day 0, 3</td><td>Day 0, 3, 7, 14</td></tr></table> | Rabies Prophylaxis | Pre-EP | No Pre-EP | Immunoglobulin (Wound Site) | None | Human Ig - 20U/Kg OR Equine Ig - 40U/Kg | Vaccine (1 mL) (Deltoid or AL thigh) | Day 0, 3 | Day 0, 3, 7, 14 | | | | | | | | | | |
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| | Patients bitten by healthy appearing domestic animals may delay rabies post exposure prophylaxis if the animal is quarantined . These animals should be observed for 10 days , and if they show no sign of infection during the observation period they may be released, and the patient does not need to be vaccinated . Signs of infection in an animal include excessive salivation, aggression, paralysis, daytime activity in nocturnal animals, and impaired movement. If the animal shows any signs of infection, the patient should start the vaccination schedule and continue until the animal has been tested at an approved facility. | | | | | | | | | | | | | | | | | | | |

SNAKE BITES

(BIO-KEN SNAKE FARM, +254 42-32303 or +254 733 290 324 for information on correct antivenom. <http://www.bio-ken.com/>)

| Syndrome | Painful progressive swelling | Progressive weakness | Bleeding |
|--|---|--|---|
| Important snakes | African puff adder, Eastern Gabon viper, Rhinoceros Horned Viper, Red Carpet Viper, Black-necked Spitting Cobra, Red Spitting Cobra | Eastern Green Mamba, Eastern Jameson's Mamba, Black Mamba, Egyptian Cobra, Forest Cobra | Coastal Boomslang |
| Clinical Picture | Mild: slow progressive painful swelling Severe: rapidly progressive swelling and severe pain, ecchymosis, blisters, severe tissue necrosis, abscess formation, pseudo- and true compartment syndrome, nausea and vomiting, hypotension, bleeding tendency, shock, rhabdomyolysis, renal failure | Ptosis, diplopia, dilated pupils, difficulties in swallowing, salivation, progressive difficulty breathing, hypoxia | Bleeding from puncture sites, Minor lacerations, development of disseminated intravascular coagulopathy over time |
| Management | <ul style="list-style-type: none">Establish IV accessGive analgesiaPosition the limb at the level of the heartGive IV fluid for shock and renal failureTreat local complication appropriately | <ul style="list-style-type: none">Establish IV accessMonitor oxygenation and ventilation closely (HDU)Intubation and mechanical ventilation may be necessary | <ul style="list-style-type: none">Establish IV accessGive blood/blood component therapy if indicatedHeparin, antifibrinolytics, thrombolytics are of no value and may be dangerous |
| Indications for Antivenom Antivenom is NOT indicated if the patient is asymptomatic | Polyvalent antivenom <ul style="list-style-type: none">Swelling progressive at ≥15cm/hrSwelling to a knee or elbow from a foot or hand bite within 4 hoursSwelling of a whole limb by 8 hoursSwelling threatening the airwayAn associated coagulopathyUnexplained dyspnoeaConsider antivenom if snake is unknown but envenomation is severe. | Polyvalent antivenom <ul style="list-style-type: none">Triad of (either)<ol style="list-style-type: none">paraesthesia,excessive salivation/metallic taste and sweatingdyspnoeain the absence of painful progressive swelling (mambas)Paresis in the presence of significant swelling (non-spitting cobras) | Monovalent antivenom <ul style="list-style-type: none">Active bleedingNon-clotting blood in a clean test tube after 20 minutesLaboratory evidence of coagulopathy |

Administration of Antivenom:

- Dilute the antivenom in normal saline (**no more than 20 ml per 500mL bag**). Give it by intravenous infusion diluted in a drip **over 30 mins**, or by slow bolus injection at **1-2mL/min**. Remember not to have the drip running direct into the wounded limb which is already in danger from the pressure of swelling and should be kept elevated and well protected.
- Remember to have adrenaline (1:1,000) at the bedside in case of anaphylaxis. If the patient has known allergies (asthma etc.), draw up the adrenaline (0.3 - 0.5 ml for adults and 0.1 - 0.3 for children) and have antihistamine available in case allergic symptoms are overwhelming. Antihistamine is **NOT recommended as routine treatment** for snake-bite.
- Monitor breathing and other vital signs continuously.
- DO NOT** infiltrate the bite area with antivenom.