



### Key Points:

- **Dog bites** account for ~90% of animal bites. More likely to cause crush injuries due to powerful jaw strength
- **Cat bites** account for ~10% of animal bites. More likely to cause infection due to puncture wound with deep inoculum

### Investigations:

- **X-ray imaging**
  - Indications: deep bite wounds, including those near joints, crush injuries (dog bites), suspected fracture, suspected foreign body
- **Wound culture**
  - Indication: if signs of infection are present (eg. fever, erythema, swelling, hot to touch, tender, purulence)
- **Blood culture**
  - Indications: If signs of bacteremia are present (e.g. fever, hemodynamic instability, signs of shock) or in immunosuppressed patients



### Presentation

#### History:

- Type of animal
- Time since injury
- Tetanus immunization status of patient
- Details of animal (wild vs. family pet vs. other)
- Signs and symptoms of infection (eg. fever, erythema, swelling, hot to touch, tender, purulence)

#### Physical Exam:

- Evaluate depth of wound and/or presence of crush injury (edema, contusion and neurologic dysfunction)
- Look for joint penetration
- Check neurovascular status
- Evaluate for obvious foreign body in wound

**⚠ Deep wounds near vital structures should be treated as penetrating trauma**

### Microorganisms

#### Dog Bite Wound:

- Pasteurella canis
- Capnocytophaga canimorsus\*\*



#### Organisms Found in Both:

- Pasteurella multocida\*
- Bacteroides
- Staphylococcus aureus
- Streptococcus alpha-hemolytic
- Corynebacterium

#### Cat Bite Wound:

- Bartonella henselae



\* Pasteurella multocida is isolated from 75% of cat bites and 50% of dog bites

### Management

#### Wound Care:

- Control bleeding
- Provide local anesthesia if required
- Clean wound with antiseptic solution
- Copious irrigation with sterile saline
- Remove grossly visible debris
- Close wound- weigh risks and benefits of primary intention vs. secondary intention closure

#### Antibiotics Indications:

- If signs of wound infection or systemic infection are present
- Or**
- In a clinically uninfected wound with any of the following:
    - Deep puncture wounds or lacerations (eg. cat bites)
    - Wounds requiring surgical repair or undergoing primary closure
    - Wounds on the hand, face or genital area

#### Rabies and Tetanus Prophylaxis:

- **Rabies:** Perform risk assessment to determine need for rabies post-exposure prophylaxis. Refer to guidelines in your health care region
- **Tetanus:** Determine tetanus immunization status in ALL patients with bite wounds → tetanus prophylaxis administered as indicated

#### Operative Treatment Indications:

- Crush or devitalized tissue
- Foreign body
- Bites to digital pulp space, nail bed, flexor tendon sheath, deep spaces of the palm
- Septic arthritis
- Abscess formation
- Neurovascular injury
- Functionally or aesthetically sensitive area

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