Animal Bites: Information for Health Care Providers

FACT SHEET

EPIDEMIOLOGY

- Dog and cat bites are responsible for 1% of emergency room visits each year, accounting for $30 million in annual health care costs nationwide.
- In the U.S., dogs are responsible for more than 2/3 of domestic animal bites, causing 19 deaths per year; boys age 5 to 9 years are at the highest risk for injury.

MICROBIOLOGY AND PATHOGENESIS

- Infection occurs when the oral flora of a biting animal gains entry through breaks in the skin, or when open wounds become contaminated by bacteria in the environment.
- Bites that penetrate the skin have an infection rate of 6-13%. Wounds cleaned and treated in the emergency department have a rate around 5%.
- Polymicrobial infection is common, including both aerobic bacteria (e.g. Pasteurella, Streptococcus, and Staphylococcus species) and anaerobic bacteria (e.g. Fuso bacterium, Bacteroides, Porphyromonas, and Prevotella). Different animal species have a different spectrum of potential microbes. Cat bites have a higher rate of infection than dog bites.
- Puncture wounds, hand wounds, and wounds that are greater than 24 hours old are at higher risk for infection.
- Individuals who are asplenic or immune compromised are at risk for systemic infection.

TREATMENT

- Immediately wash the wound thoroughly with soap and water.
- Carefully clean and explore wounds.
- Irrigate wounds thoroughly with sterile saline.
- Evaluate wounds for injury to nearby nerves, vessels, tendons, ligaments, joints, and bone. Consider radiography if bone involvement is suspected.
- Debride, drain, and close wounds as appropriate.
- Consider obtaining wound cultures for identification and antibiotic sensitivity.
- Consider prophylactic antibiotics for wounds at higher risk for infection.
- Obtain the patient’s history of tetanus-containing vaccine (DTaP = diphtheria, tetanus, & acellular pertussis; DT = diphtheria & tetanus; Td = tetanus & diphtheria toxoids, Tdap = combined tetanus, diphtheria, & pertussis, TT= tetanus toxoid).
- Administer a tetanus-containing vaccine if patient:
  - Has had an unknown number or less than 3 doses of tetanus containing vaccine, or
  - Has had 5 or more years since the last dose of tetanus containing vaccine.
- Administer tetanus immune globulin in addition to a tetanus containing vaccine* if patient:
  - Has had an unknown number or less than 3 doses of tetanus containing vaccine, or
  - Is under 6 months old, and has a mother with an unknown number or less than 3 doses of tetanus containing vaccine at the time of delivery.
- The American Academy of Pediatrics also recommends TIG for HIV positive bite victims.
- The recommendation regarding tetanus-containing vaccine varies with age:
  - Under 7 years of age: give DTaP if pertussis vaccination is not contraindicated.
  - Age 7 to 10 years: administer Td.
  - Age 11 to 64 years: Tdap is preferred if the patient has never received Tdap; Td is preferred if the patient has received Tdap, or if Tdap is not available.
  - Age 65 and older: administer Td or Tdap.
- Assess the patient’s risk for rabies, and administer rabies post-exposure prophylaxis Using the guide on the back of this page.

HCPH Veterinary Public Health (VPH) is the Local Rabies Control Authority for Harris County. Call (281) 999-3191 to report bites.

Source: Thank you to Seattle & King County Public Health, Seattle, Washington for sharing their information. Rev. 6/16