

Handling Dog Bite Wounds

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Editorial

Dog bites represented 1% of all injuries reported by the Canadian Hospitals Injury Reporting and Prevention Program (CHIRPP) in 1996. Of all dog bite injuries, 57.9% were sustained by males, occurring most frequently at the victim's own home, in victims between the age of 5 to 9 years and in the summer [1].

Most dog bite wounds are treated in the emergency department. Wound management as per Oehler et al. [2] includes anaesthetizing the wound and then careful and effective examination. Removal of all devitalized tissue and clots because any foreign bodies can act as a source of infection. This is known as debridement and provides for surgically clean wounds that are faster to heal.

Wound irrigation via isotonic sodium chloride solution is effective and safe for cleaning large dirty wounds. Irrigation using soap and warm tap water is also an equivalent means of wound cleaning [3].

Most wounds are best treated by delayed primary closure to avoid super infection [4]. Wounds on the face can be closed because of the excellent blood supply in the face. However, risk of super infections should be discussed with the patient. Dog bite wounds in the lower extremities and hands should be left open.

Tetanus and rabies (if the offending dog has uncertain vaccination history) immunizations are recommended as prophylaxis for all wounds. All dogs in North America are expected to be vaccinated against rabies, which makes rabies immunizations for the victim redundant. In unvaccinated individuals, the initial primary series of tetanus shots must be administered. A tetanus booster dose should be administered to individuals who have had no doses in the past year. If bone penetration is involved, radiography via CT scan or MRI is required. Antibiotic therapy should be initiated as a prophylaxis. Amoxicillin-

clavulanate potassium (Augmentin) is the antibiotic of choice for a dog bite [5]. Doxycycline can be used in patients who are allergic to penicillin but not in children younger than eight years and pregnant women. Antimicrobial resistance is common with erythromycin therapy and as such should not be used as first-line therapy. Acceptable combinations include clindamycin and a fluoroquinolone in adults or clindamycin and trimethoprim-sulfamethoxazole in children [5]. If methicillin-resistant *Staphylococcus aureus* (MRSA) is suspected, first-line antibiotics include trimethoprim-sulfamethoxazole, doxycycline, minocycline, and clindamycin [1]. For patients with fever, sepsis, cellulites, crush injury, immune-compromise or non compliance, hospitalization is warranted and daily intramuscular injections of ceftriaxone are appropriate especially in non compliant patients [5].

In conclusion, dog bites wounds must be handled carefully in the emergency department. Preference is given to leave such wounds open to avoid super infections. However, for cosmetic reasons, facial wounds can be closed after discussion with the patient and plastic surgeon.

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