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Letter to the Editor

A dog tooth case stuck to the bone after bite

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Dear Editor,

The dog retains the old wild animal characteristics and instincts, and behaviors that may lead to attacks on man may show although there was the close association between humans and domesticated dogs for centuries (1). The location of injury due to dog bites is commonly dependent on age. Even though the most frequently affected parts of the body are the head, face, and neck in the younger children, are the hands in the older population. If not timely treatment of injury, it can cause serious complications (2). In this case, we presented the management of patients admitted to the emergency room due to dog bites.

52-year-old male patient applied to emergency department with pain and swelling on the right arm because of the dog bites a day before. There were teeth marks, swelling, redness, and tenderness on his right hand-wrist dorsal. Other sings of examination were normal. Tension arterial was 110/80 mmHg, pulse was 90 bpm, and temperature was 37 oC. Wound care, rabies and tetanus vaccine were administrated, and prophylactic antibiotic was given. Opacity was observed on the ulnar bone in the patient's right forearm and wrist X-ray, was compatible with the tooth of the dog (Figure 1). The tooth of the dog on the right ulnar bone was removed with surgery.

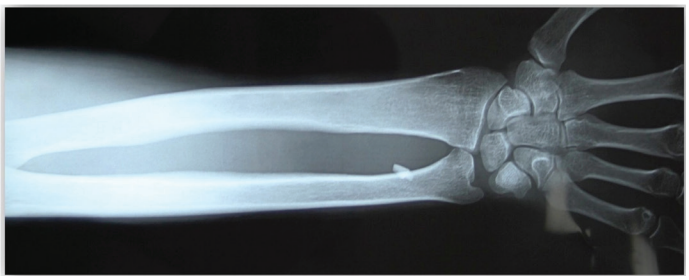

Figure 1. The dog tooth on the right ulnar bone

A great number of patients with bite wounds admitted to emergency department. According to the Ministry of Health records, incidence of bite cases is 100000/year and mortality rate is 5-8/100000 (3,4).

The most commonly affected parts of body to bite are extremities. In a study, Morgan et al. (5) found that the hands are the parts of the body most common injured in dog bites. Overall et al. (6) have found similar results.

In addition, they detected that hand injury may be more frequent in the older population due to they try to protect themselves by pushing the dog away. Our patient had bite wounds in the hand in accordance with literature. But, he was not elderly.

There is no current guideline of a bite wound management and treatment may vary depending on the wound characteristics. To reduce morbidity and mortality, wound size, type (laceration, puncture, crush, and break), the status of the surrounding tissues, and neurological motor, and vascular functions should be recorded. Dogs can lead to bone fractures due to the strong jaw structures during bite. If there are injuries involving joint and hand, taking plain radiographs will be useful in terms of demonstration of fractures or presence of foreign bodies in tissue (7).

Bite wounds have a special position in traumatology because of the high mortality and complication rates. The most common complication is wound infection in bite wounds. Animal bite wounds are usually contaminated due to the large number of bacteria in the oral cavity, and their treatment is quite difficult due to treatment-resistant and polymicrobial infections. In addition to local wound infection, other complications include lymphangitis, abscess, septic arthritis, tenosynovitis, and osteomyelitis (3). To avoid infections, the wound should be cleaned by washing with soap and plenty of water initially and necrotic tissues and foreign objects must be removed from the wound (7).

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Antibiotic therapy is indicated for infected bite wounds and fresh wounds considered at risk for infection, such as extensive wounds, large hematoma, foreign body, and fractures. Tetanus and rabies prophylaxis must be applied in all dog bites (3). Wound closure by suturing is controversial. Infected wounds and injuries over the last 24 hours should be left open. In addition, injuries in areas with high risk of infection such as hand can be left open (7). As a result of, patients with bite wounds admitted emergency department should be particularly evaluated. First wound care should be made, later, prophylactic antibiotics and vaccines should be applied, finally, patient must be consulted with the relevant branch.

Informed Consent: Written informed consent was obtained from patient's parent who participated in this study.

Conflict of Interest: The authors have no conflict of interest to declare.

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Informed Voluntary Consent Form: Informed volunteer consent form was taken from the patient of the case.

REFERENCES

1. Weiss HB, Friedman DI, Coben JH. Incidence of dog bite injuries treated in emergency departments. JAMA 1998;279:51-3.
2. Bernardo LM, Gardner MJ, Rosenfield RL, et al. A comparison of dog bite injuries in younger and older children treated in a pediatric emergency department. Pediatr Emerg Care 2002;18:247-9.
3. Abuabara A. A review of facial injuries due to dog bites. Med Oral Patol Oral Cir Bucal. 2006;11:E348-50.
4. Sunam GS, Ceran S, Arıbaş OK, et al. Köpek ısırığına bağlı pnömotoraks olgusu. Genel Tıp Derg 2002;12:71-3.
5. Morgan M, Palmer J. Dog bites. BMJ. 2007; 34:413-7.
6. Overall KL, Love M. Dog bites to humans-demography, epidemiology, injury, and risk. J Am Vet Med Assoc. 2001;218:1923-34.
7. Karakas A, Ilhan H, Turhan V. Animal and Human Bites: Prophlaxis and Approach to the Treatment. Türk Hijyen ve Deneysel Biyoloji Dergisi 2010;67:153-60.