



## Ulna fracture and medial meniscal tear resulting from dog-related injuries

Köpeklerle ilgili zedelenmelere bağlı ulna kırığı ve medial menisküs yırtığı

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### ABSTRACT

In this article, we present two middle-aged female patients with ulna fracture or medial meniscal tear resulting from dog-related injuries, which are not common. Both patients mentioned that pain started after their dogs pulled away their collar ropes strongly and suddenly. Both patients had postmenopausal osteoporosis and degenerative osteoarthritis. For this reason, ulna fracture and meniscus tear had developed with low-energy trauma resulting from dog-related injuries.

**Keywords:** Dog-related injuries; meniscus tear; ulna fracture.

### ÖZ

Bu yazıda, sık görülmeyen, köpeklerle ilgili zedelenmeler sonucu oluşmuş ulna kırığı veya medial menisküs yırtığı olan iki orta yaşlı kadın hasta sunuldu. İki hasta da, köpek tasmasının köpekleri tarafından kuvvetlice ve aniden çekilmesinden sonra ağrının başladığını ifade etti. İki hastanın postmenopozal osteoporozu ve dejeneratif osteoartriti vardı. Bu nedenle, köpeklerle ilgili zedelenmeler nedeniyle gelişen düşük enerjili travma ile ulna kırığı veya menisküs yırtığı oluşmuştu.

**Anahtar sözcükler:** Köpeklerle ilgili zedelenmeler; menisküs yırtığı; ulna kırığı.

It is estimated that dog attack injuries are responsible for an average of 250,000 minor injuries and emergency unit attendances each year, in United Kingdom.<sup>[1]</sup> In United States emergency departments, 368,245 patients were treated for dog bites in 2001 alone, the majority of whom were five to nine years old.<sup>[2]</sup>

In this article, we present two middle-aged female patients with ulna fracture or medial meniscal tear resulting from dog-related injuries, which are not common.<sup>[3]</sup>

### CASE REPORT

**Case 1-** A 64-year-old female patient presented with pain in her left wrist. She told that pain started after the dog collar rope was strongly and suddenly pulled away by her big dog. Physical examination revealed swelling around left wrist. The range of motion in left wrist was restricted.

The radiogram of left forearm including wrist demonstrated oblique spiral fracture of distal ulna. The fracture was non-displaced, and was immobilized in a splint for six weeks (Figure 1a and b). A brace was applied for another six weeks and wrist exercises were begun (Figure 1c). Three months later, anteroposterior and lateral radiograms showed solid union of distal ulna fracture (Figure 1d), and the patient was completely asymptomatic with full range of motion of the wrist. A written informed consent was obtained from the patient.

**Case 2-** A 63-year-old female patient presented with pain in her right knee. She told that pain started after the dog collar rope was strongly and suddenly pulled away by her big dog. Physical examination revealed swelling around right knee. The range of motion in right knee was restricted. The magnetic resonance imaging showed medial



**Figure 1.** (a) Anteroposterior and lateral radiograms showing distal ulna fracture. (b) Anteroposterior and lateral radiograms showing distal ulna fracture in a splint. (c) Anteroposterior and lateral radiograms showing distal ulna fracture six weeks later. (d) Anteroposterior and lateral radiograms showing solid union of distal ulna fracture three months later.

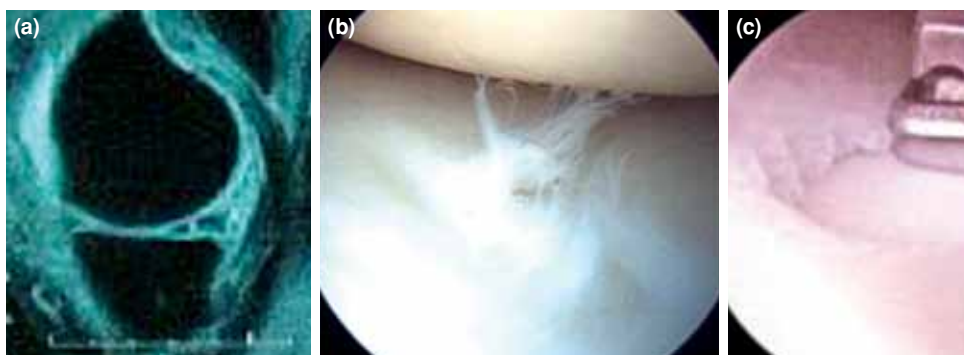
meniscal tear in central region of the right knee (Figure 2a).

Arthroscopic partial meniscectomy of the tear was performed under general anesthesia (Figure 2b and c). The patient was allowed to walk with full weight bearing on postoperative first day. She was completely asymptomatic with full range of motion of the right knee in a week. A written informed consent was obtained from the patient.

## DISCUSSION

There are case reports due to dog attacks and dog bites; however, the majority of patients are children.<sup>[2]</sup> Children in particular are more likely to experience dog-bite injuries compared to adults, and considered to be at greater risk.<sup>[4]</sup>

We report two middle-aged patients with ulna fracture or medial meniscal tear resulting from dog injuries, which are not commonly seen or reported.



**Figure 2.** (a) Magnetic resonance imaging showing medial meniscal tear in central region. (b) Arthroscopic view of tear. (c) Arthroscopic partial meniscectomy of tear.

These two female patients had postmenopausal osteoporosis and degenerative osteoarthritis. For this reason, when their big dogs pulled away their collar rope strongly and suddenly, ulna fracture and meniscus tear developed with low-energy trauma.

In patients with dog and cat bites to the hand, Benson et al.<sup>[5]</sup> calculated that the mean expenditure for a patient who needed large debridement, repair of nerve and tendon, and intravenous antibiotics were about USD 77,730/patient. Rehabilitation visits to the physiotherapist or further reconstructive surgery in the future, lost days at work or complications were not included in that amount. Orthopaedic surgeons should be aware of this fact and should inform the patients about this issue.

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