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CASE REPORT

Self-inflicted shotgun wound to the knee—a drastic measure for intractable knee pain

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Introduction

Self-inflicted gunshot wounds are usually suicide attempts. Most reports in the literature describe deliberate gunshot wounds to the head, face, abdomen and chest.[6] Self-inflicted gunshot wounds to the extremities are however rare

We report an unusual case in which a patient shot himself at close range with a shotgun due to chronic knee pain.

Case report

A 57-year-old-male presented to the accident and emergency department following a close-range, self-inflicted shotgun wound to his left lower limb.

Clinically, the patient had a 3-year history of left knee pain due to moderate degenerative joint disease. However, plain radiographs of the knee taken 6 months previously demonstrated only minor degenerative changes.

The patient stated that he had shot himself as the pain in his knee had become unbearable. He reported no previous history of a psychiatric illness. Alcohol had been ingested prior to the event. With this history, it was initially thought that this was an impulsive episode precipitated by intoxication.

Clinical examination revealed extensive loss of the periarticular soft tissues (Fig. 1). Radiographs demonstrated gross destruction of the distal femur and proximal tibia (Fig. 2). The foot however was sensate and a dorsal pulse was palpable.

Due to the extent of the combined bone and soft tissue loss, an above knee amputation was performed.

Subsequent psychiatric evaluation revealed a previous history of chronic harmful use of alcohol, a depressive disorder and deliberate self-harm in the form of an overdose. In summary, it was felt that he had some dissocial personality traits and this coupled with alcohol had led to this impulsive episode.

At 6-month review, he continues to rehabilitate and mobilizes with the aid of a prosthetic limb. He no longer suffers from chronic pain and does not complain of phantom pain. There have been no further episodes of self-harm. However, due to the violent nature of the method used, this gentleman is at risk of suicide in future.

Discussion

Self-inflicted gunshot wounds to the extremities are rare. Most reports in the literature describe deliberate gunshot wounds to the head, face, abdomen and chest.[6,9–11] In order of frequency, handguns are most commonly used, followed by shotguns.[1] Twenty-three percent of gunshot inju-

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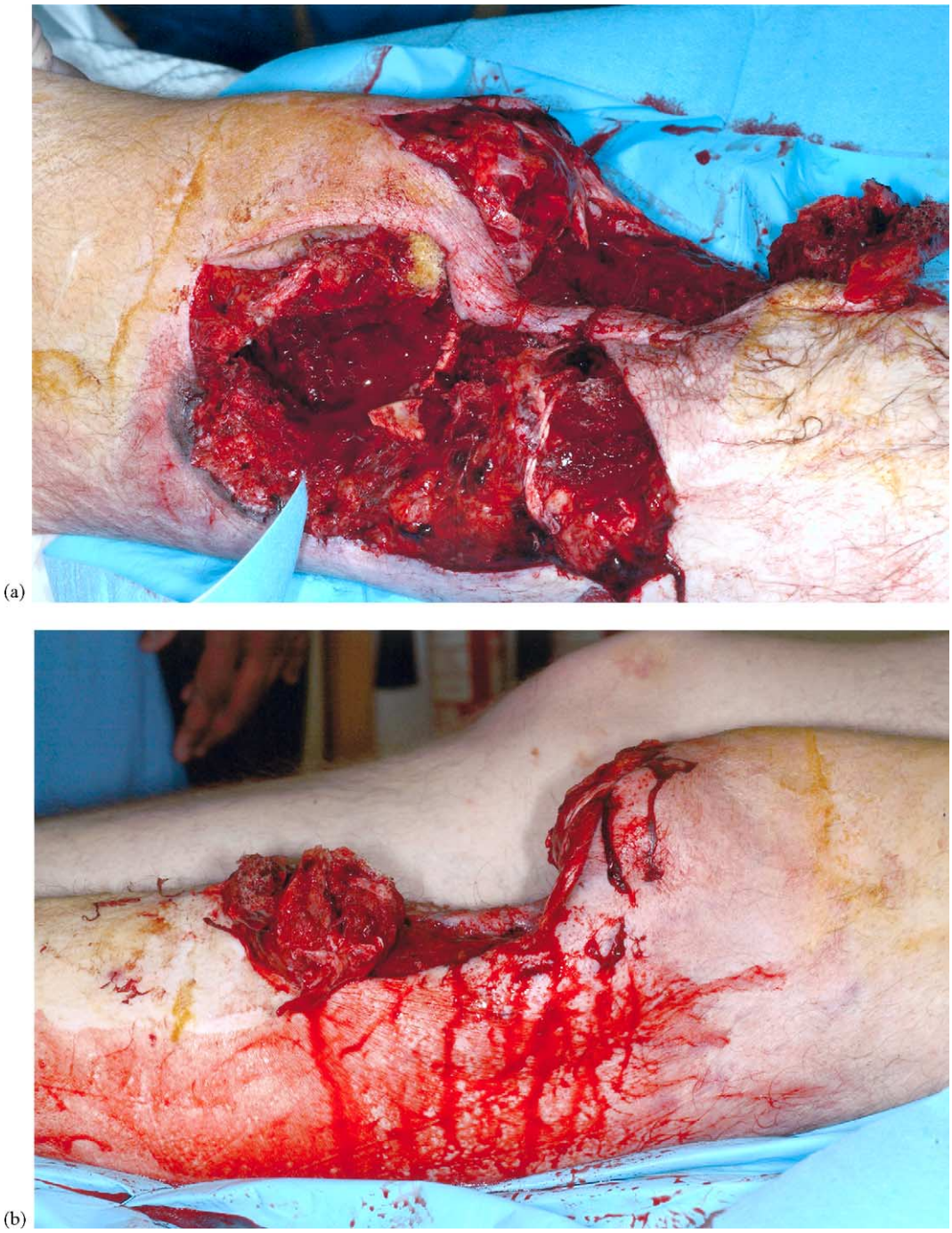

Figure 1 (a and b) Photographs of left lower limb demonstrating extensive soft tissue loss.

ries are intentional and that 91% of individuals die immediately at the scene.[1] Whilst fatalities from road traffic accidents are decreasing, those from shotgun injuries are on the rise.[11,2] Most episodes are described as impulsive [7] and alcohol ingestion is a common associated feature [4,6,10] as in this case. The majority are usually suicide attempts [10,11,7] rather than a method of deliberate self-harm. In this case intractable knee pain was the stimulus for the event. A previously documented history of psychiatric illness is noted in 17-30% of cases.[10,8]

Shotguns, although low velocity weapons, can be extremely destructive, particularly at close range.[11] Fifty percent of shotgun wounds to the limbs are associated with major soft tissue destruction and 45% have significant bone and/or joint involvement.[5] Vascular injury is often seen.[3]

Despite best efforts at limb salvage, amputation is often required.

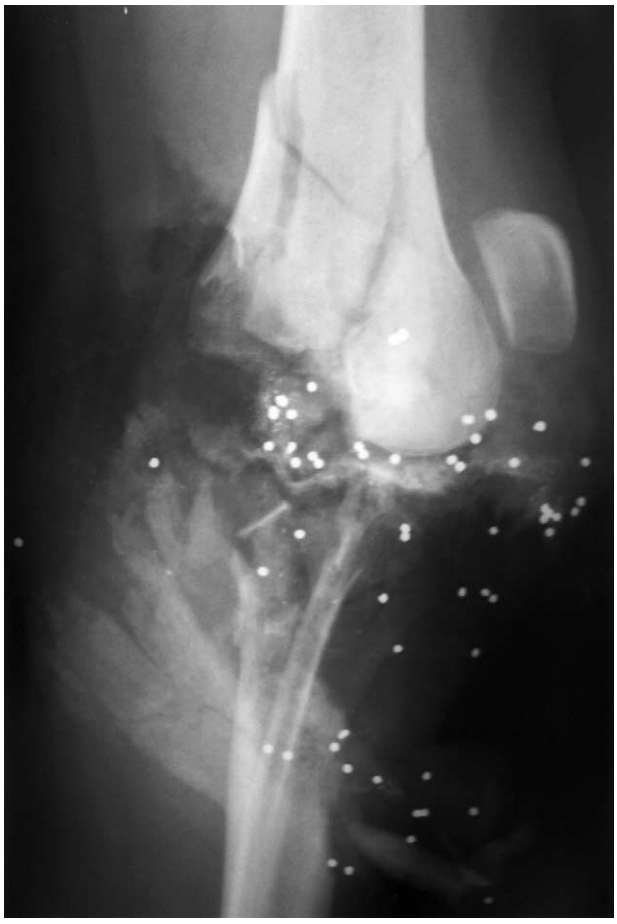

Figure 2 Anteroposterior radiograph of left knee demonstrating gross bony destruction of the distal femur and proximal tibia.

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