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Bataclan's ulnar nerve syndrome

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Clinical Communication to the Editor

Bataclan's ulnar nerve syndrome.

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On November 13th, 2015, during terrorist attacks in the Bataclan concert room (Paris, France), a 24-years old male with no medical past history (except for thrombocytopenic purpura in childhood) was injured by gunshots on the left elbow. After having escaped, he was taken in charge by pre-hospital units and transferred to the emergency room of a proximity general hospital. At initial examination, he presented only limited skin erosion without penetrating wound on the postero-medial face of the left elbow, as seen on Figure 1, panel A. He received a prescription for local antiseptics and simple dressings for 7 days, and was discharged.

However, he initially noticed a numbness of the left 5th finger, which did not improved over days. One week after the initial event, he was referred to our unit, specialized in upper limb and peripheral nerve surgery.

On physical examination, he presented a complete sensitive-motor palsy of the ulnar nerve, with an anesthesia of the 5th finger. Froment's sign and Wartenberg's sign were positive. Bouvier's Manoeuvre was positive as well, with a 90° flexum of the proximal interphalangeal joint. Third finger mobility, as assessed by Egawa's test, was 0.5 cm on the left hand, and 5 cm on the right hand. Finally, Tinel's sign was also present, suggesting nerve irritation at the cutaneous injury site.

No fracture was seen on X-rays. Electromyographic study concluded on a major ulnar nerve palsy at the elbow level. Elbow MRI showed a bony bruise of the medial condyle (Figure 1, panel B, white arrow), and a hypersignal of the ulnar nerve on T2-weighted MRI scans (Figure 1, panel B, open arrow).

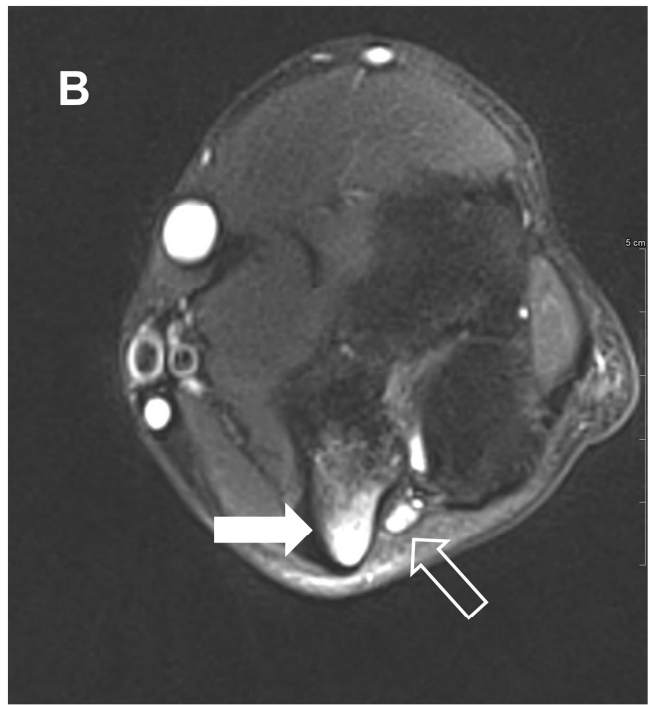
Beyond psychological follow-up and anxiolytic therapy (alprazolam 0.25 mg tid), a conservative management was offered for the ulnar neurological symptoms. As expected, this Sunderland stage 1 nerve injury had a favourable clinical course, with an improvement of the 5th finger sensitivity over the following six months. A cautious monitoring is ongoing, since neurolysis might be necessary in case of incomplete recovery.

Although nerve lesions induced by gunshot injuries are well described, cases of nerve palsy in lack of transfixing wound have not been reported to date. The shock wave induced by 7.62 mm bullets from Kalachnikov AK-47 could account for this ulnar nerve lesion. However, it could theoretically be observed only in subcutaneous nerve segments, such as ulnar nerve at the elbow or fibular nerve at the knee.

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