Case report

An unusual case of haemorrhagic median neuropathy

Anirban Mandal, James Colville, Malcolm Jones, MWH Erdmann

Sunderland Royal Infirmary, Sunderland, UK

The authors describe a rare case of carpal tunnel syndrome secondary to intraneural haemorrhage of the median nerve

A 71-year-old retired engineer was admitted in the department of haematology with the diagnosis of multiple myeloma. He was subsequently referred to our department with clinically and nerve-conduction test confirmed bilateral carpal tunnel syndrome, worse on the left side than right. He had also associated bilateral Dupuytren's disease.

The initial aim was to do bilateral carpal tunnel release with full exploration and biopsy. However, the patient felt

that he would not be able to manage at home. Therefore, we came to an agreed decision to undertake surgery on the left side first and the right side at a later date.

All his haematological investigations were normal with no symptoms and signs of platelet dysfunction.

Exploration of left carpal tunnel was done under tourniquet control. It was noted that the soft tissues were bleeding profusely including the wound edges, despite the tourniquet which was at 200 mmHg. Under direct vision, the transverse carpal ligament was opened to reveal haemorrhagic, contused, median nerve throughout its whole length, even proximal to the wound incision point (Fig. 1). There was no evidence of other compression pathology, tumour or aberrant vessels. A number of petechiae were noted within the skin; therefore, the tourniquet was released. At this point, there was no bleeding from the anterior median artery. The haematoma, which was intraneural within the median nerve, was fresh and there was obvious concern that the disease process of myeloma and the use of tourniquet may have exacerbated the intraneural haematoma.

Postoperatively, the clotting screen was normal and the patient had a significant recovery.

Three months later, right carpal tunnel decompression was undertaken without tourniquet. The entire peri-operative period was uneventful without any particular problems.

Discussion

Carpal tunnel syndrome secondary to intraneural haemorrhage of median nerve is rare.¹ This condition has been

Figure 1 Operative view of carpal tunnel showing the haemorrhagic median neuropathy.

reported in haemophiliacs, patients taking anticoagulants usually with a history of trauma and, very rarely, in patients with bleeding diathesis.^{2,3} We believe that this case of haemorrhagic median neuropathy in a patient with multiple myeloma has not been previously reported in the British literature.

We recommend recognising intraneural bleeding as a cause of median nerve compression in myeloma patients, even in the absence of a history of trauma.

We also strongly advise not to use the tourniquet in such patients even if the coagulation status is normal.

References

1. Howie CR, Buxton R. Acute carpal tunnel syndrome due to spontaneous haemorrhage. *J Hand Surg* 1984; **9**: 137–8.
2. Bonatz E, Seabolt KE. Acute carpal syndrome in a patient taking coumadin: case report. *J Trauma* 1993; **35**: 143–4.
3. Bindiger A, Zelnik J. Spontaneous acute carpal syndrome in an anticoagulated patient. *Bull Hosp Joint Dis* 1995; **54**: 52–3.