

Neurosciences Quiz

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Notice: Authors are encouraged to submit quizzes for possible publication in the Journal. These may be in any field of Clinical Neurosciences, and should approximately follow the format used here. Please address any submissions to the Assistant Editor, Neurosciences Journal, Riyadh Armed Forces Hospital, PO Box 7897, Riyadh 11159, Kingdom of Saudi Arabia.
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A young man with paresthesiae in the left hand

Case Presentation

A 16-year-old male patient complains of paresthesiae and numbness of the fifth finger of the left hand. Nerve conduction study was carried out in both upper limbs. Please study Figures 1 & 2.

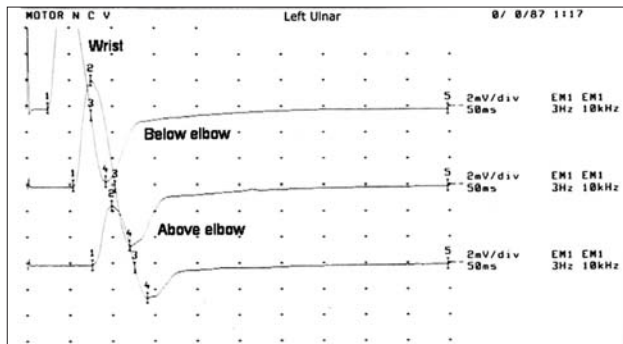


Figure 1.

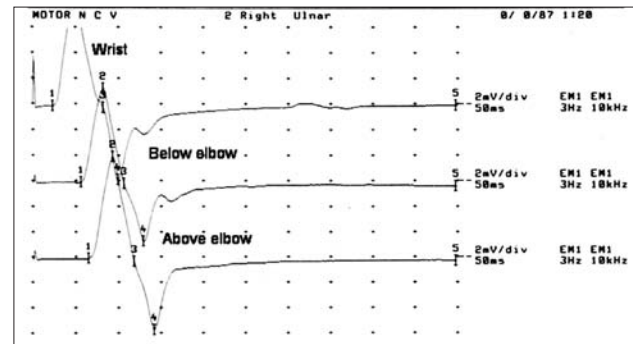


Figure 2.

Question:

These 3 compound muscle action potentials (CMAP) of both ulnar nerves were recorded at the wrist, below, and above the elbow.

What is the diagnosis?

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Answer

Left ulnar neuropathy at the elbow

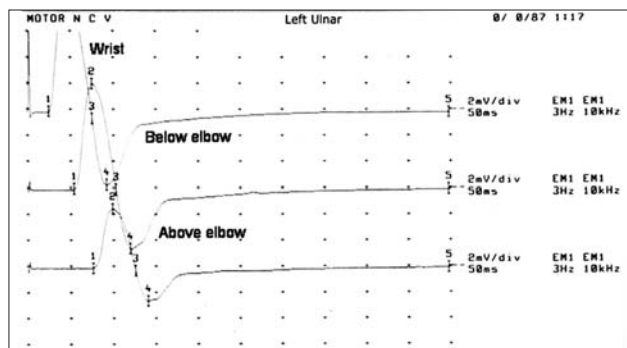


Figure 1.

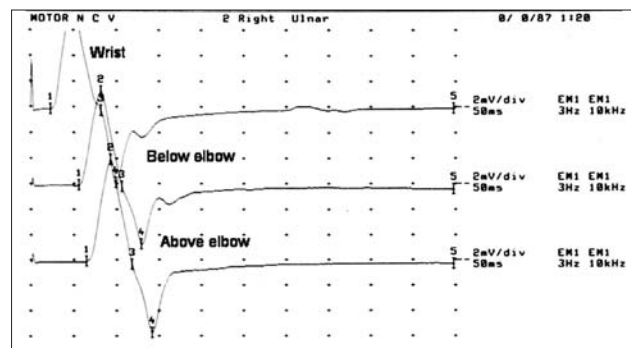


Figure 2.

Discussion

This 16-year-old patient who leans on the left elbow during computer usage complained of paresthesiae and numbness of the left 5th finger with a positive Tinel sign at the left elbow. The motor conduction study (**Figure 1**) shows a potential demyelinative conduction block of the left ulnar nerve at the elbow^{1,2} with a drop of 50% of amplitude of CMAP above the elbow (4 mV) compared to below the elbow (8 mV) and to the right asymptomatic side where the amplitude of CMAP above and below the elbow were 7 and 8 mV (**Figure 2**).

References

1. Dimitru D. *Electrodiagnostic medicine*. Philadelphia (PA): Hanley and Belfus; 1995.
2. Kincaid JC. AAEE minimonograph #31: the electrodiagnosis of ulnar neuropathy at the elbow. *Muscle Nerve* 1998; 11: 1005-1015.