

## ESSENTIAL ARTICLES OF PM&R

### ELECTRODIAGNOSIS

#### Authors:

Chloe Bomberger, MD

Frank Lorch, MD

#### **Anterior interosseous nerve syndrome: Fascicular motor lesions of median nerve trunk.**

**Neurology 2014 Feb 18;82(7):598-606.** *Fascinating study where MR neurography was used to prove the presence of fascicular lesions in the upper arm in patients with spontaneous anterior interosseous nerve syndrome (AINS) diagnosed by EMG. The affected fascicles maintained their somatopic organization from the main trunk of the median nerve in the upper arm to the AIN in the forearm. These findings suggest that AINS is a multifocal mononeuropathy and not an entrapment neuropathy in the majority of cases and this study draws attention to the fact that somatopic and fascicular organization can lead to incorrect localization by electrodiagnostic testing.*

#### **How electrodiagnosis predicts clinical outcome of focal peripheral nerve lesions. Muscle**

**Nerve 52: 321–333, 2015.** *An excellent review of how common electrodiagnostic measures used in the evaluation of focal peripheral nerve injuries can be used to predict prognosis. Also reviewed are important concepts related to mechanism and location of injury and pathophysiology.*

#### **Proper performance and interpretation of electrodiagnostic studies(American Association of Neuromuscular &Electrodiagnostic Medicine).**

Muscle Nerve Mar 01, 2006;33(3):436-9.

#### **Needle electromyography.**

Daube J, Rubin D. Muscle & Nerve Feb 2009;244-270.

#### **Do all neuropathy patients need an EMG at least once?**

Continuum (Minneapolis, MN) 2014;20(5):1430–1434.

#### **Electrodiagnostic Evaluation of CTS (AANEM Monograph).**

Muscle Nerve 2011;44:597–607.

#### **Utility of electrodiagnostic testing in evaluating patients with lumbosacral radiculopathy: An evidence-based review.**

Muscle Nerve 2010;42:276–282.

#### **Diabetic polyneuropathies: Update on research definition, diagnostic criteria and estimation of severity.**

Diabetes Metab Res Rev Oct 2011;27(7):620-8. doi: 10.1002/dmrr.1226.

**The Thoracic Outlet Syndromes.**

Muscle Nerve 2012;45:780-795.

**European Federation of Neurological Societies/Peripheral Nerve Society Guideline on management of chronic inflammatory demyelinating polyradiculoneuropathy: Report of a joint task force of the European Federation of Neurological Societies and the Peripheral Nerve Society — First Revision.**

European Journal of Neurology 2010;17:356–363.

**Electrodiagnosis of ulnar neuropathy at the elbow (UNE): A Bayesian approach.**

Muscle Nerve 2014;49:337–344.

**Clinical and pathophysiological concepts of neuralgic amyotrophy.**

Nat Rev Neurol 2011;7:315–322.

**Peripheral nerves and plexus: Imaging by MR-neurography and high-resolution ultrasound.**

Curr Opin Neurol 2014;27:370–379.

**The Electrodiagnosis of Neuromuscular Disorders. Physical Medicine and Rehabilitation**

Clinics of North America Feb 2013;24(1):1-232.

*The whole issue is beneficial; highlighted articles below*

**Electrodiagnosis of Brachial Plexopathies and Proximal Upper Extremity Neuropathies**

Phys Med Rehabil Clin N Am Feb 2013;24(1):13–31.

**Anatomical, Clinical, and Electrodiagnostic Features of Radial Neuropathies**

Phys Med Rehabil Clin N Am Feb 2013;24(1):33–47.

**Clinical Features and Electrodiagnosis of Ulnar Neuropathies**

Phys Med Rehabil Clin N Am Feb 2013;24(1):49–66.

**An Electrodiagnostic Approach to the Evaluation of Peripheral Neuropathies**

Phys Med Rehabil Clin N Am Feb 2013;24(1):153-168.

**Electrodiagnostic Evaluation of Myopathies**

Phys Med Rehabil Clin N Am Feb 2013;24(1):193–207.

**Electrodiagnosis of Myotonic Disorders**

Phys Med Rehabil Clin N Am Feb 2013;24(1):209-220.

**Electrodiagnostics and clinical correlates.**

PM&R May 2013;5(5):Supplement

*The entire supplement is worth a look; particularly essential articles below:*

**Evaluating the Patient With Suspected Radiculopathy**

PMR May 2013;5(5)(Suppl):S41-S49.

**Inherited Polyneuropathies**

PMR May 2013;5(5)(Suppl):S63-S73.

**Acquired Myopathy/Dystrophies**

PMR May 2013;5(5)(Suppl):S74-S80.

**Neuromuscular Junction Disorders**

PMR May 2013;5(5)(Suppl):S81-S88.

**Electrodiagnosis in Persons with ALS.**

PMR May 2013;5(5)(Suppl):S89-S95.