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Editorial Note on: Neurophysiological assessment of spine disorders: old fashion techniques for modern clinical problems

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Magnetic Resonance Imaging (MRI) was developed in the 1980's and has revolutionized the clinical evaluation of patients with spine disorders: nowadays most spine disorders are easily diagnosed by expert neuroradiologists. However, a complete anatomo-functional characterization of the spine—an thus a correct diagnosis—can be obtained only including clinical neurophysiological examinations (electromyography and evoked potentials among others) and correlating MRI and neurophysiological findings with the patient's signs and symptoms. Hitherto, not all patients with spine disorders receive a prompt and correct diagnosis. Moreover, in some cases neurophysiological examinations are important not only for the diagnosis, but also for the monitoring and follow-up.

Sabbahi and Sengul¹ propose, in this issue, that multisegmental responses following cervical spine electrical stimulation could be a useful tool for testing patients with cervical spinal disorders. High-intensity electrical stimulation delivered over the spine is painful. In principle, this technique could be used to provide information about nerve roots^{2,3} (and about cauda equina with electric shocks delivered over the lumbar spine at even higher intensity).⁴ However, the same information about nerve roots can be obtained in a non-painful way with magnetic stimulation.^{3,5} The drawback of this non-painful assessment is the higher price of magnetic stimulators compared with the electrical ones. Its by-product is that magnetic

stimulators can also be used to stimulate the motor cortex in order to quickly and safely study the central motor conduction time, which is widely used to assess spine disorders.⁵

Certainly there is a need for optimizing the neuroradiological and neurophysiological assessment of spine disorders, but painful techniques have much less possibility to enter the armamentarium used in daily clinical practice. Sabbahi and Sengul thus have—in the next future—the hard task to demonstrate that multisegmental response is really a useful tool for 'testing patients with cervical spinal disorders'.

CONFLICT OF INTEREST

The author declares no conflict of interest.

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