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COMMENTARY

NO NEED TO COMPETE, BETTER TO COOPERATE

We read with great interest the letter by Özçakar et al. (1), which focused on the benefits of ultrasonography in lower limb entrapments. Ultrasonography has many supplementary or complementary benefits to neurophysiological studies in the diagnosis of peripheral nerve lesions. Electromyography and ultrasonography together appear to be the best combination in the evaluation of peripheral nerve lesions. However, discussing the replacement value of ultrasonography in neurophysiological studies would be useless, as both are superior in different aspects. Ultrasound provides detailed anatomical information about peripheral nerve lesions, while electrodiagnostic studies interpret the lesion through physiological information (e.g. acute or chronic lesion, degeneration and regeneration of the peripheral nerves), which is important in the management of peripheral nerve lesions, as this could not be obtained by visible detailed anatomical ultrasonographic approaches. Electromyography allows us to look directly inside the muscle and measure muscle performance. In addition, analysis of residual nerve function is only possible with the help of neurophysiological studies. Electromyographic information would help in decision-making for surgery and, for the other training regimens, in the treatment of peripheral nerve lesions.

On the other hand, ultrasonography may help with injection technique, and electrophysiology can assist in the location and precision of infiltration. For example, in botulinum toxin injections, the importance of using motor end-plate (MEP) targeting injections is already well known. Thus, neurostimulation of the muscles in order to find the nearest point to the MEP area is a widely used technique.

In addition, ultrasonography is much more user-dependent than electromyography. Among the published studies there are significant variations in the sensitivity and specificity of the diagnostic criteria of entrapment neuropathies by ultrasonography, even the critical value of the median nerve cross-sectional area indicating carpal tunnel syndrome differs considerably among various studies (2–4).

Although Özçakar et al. pointed out the benefits of ultrasonography in lower limb entrapments with impressive ultrasonographic images, it should also be emphasized that electrodiagnosis has unquestionable benefits that cannot be replaced by ultrasonographic approaches.

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