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Does a Single Nerve Conduction Study Enough to Say Transradial Angiography Is Safe for Peripheral Nerve Damages or Not?

LETTER TO THE EDITOR

To the Editors,

We read one of recent manuscripts titled "Electrophysiological Assessment of Paresthesia in Patients Following Radial Angiography: A Prospective Study" with great interest.[1] In this report, the authors tried to highlight whether the transradial approach (TRA) is a safe way for angiography, considering peripheral nerve damages (PNDs). In terms of PND, the researchers concluded that the TRA is a safe choice for angiography based on nerve conduction study (NCS) findings. With respect to their findings, we want to ask some points that have been stuck in our minds.

Whether the patients with a history of recent surgery, trauma, fracture or contracture were included or not included in the study is not clear in the method. If patients with these conditions were included, their findings should be specified in the text.

Polyneuropathy (PNP) (depending on diabetes mellitus) may affect all types of nerves at the same or different levels. As a result, a wide range of complaints and NCS results may be observed in the course of this pathology. Usually, but not all the time, damage generally affects both sides, sometimes patients may describe a dominant side or part of the body with complaints. Therefore, examination and test results may not reflect the same/similar signs and levels in every patient.[2] In this study NCS findings and their comparison with the other hand may also be affected by the 11 PNP patients' outcomes, and exclusion of patients with PNP could help to find healthier results.

Beside a detailed examination, to discriminate a patient's type of pain, whether it is neuropathic or nociceptive, clinicians use some scales like DN4 (Douleur Neuropathique en 4 Questions) and the McGill Pain Questionnaire etc.[2] To the best of our understanding, the "paresthesia" of the patients was not evaluated with neuropathic pain scales in the study, and number of patients with paresthesia (n = 77) basically depends on the author's anamnesis. The authors found their study's outcomes helpful for highlighting the importance of distinguishing between paresthesia due to local irritation and nerve complications based on NCS results. In light of this study's findings, the actual percentage of patients with paresthesia cannot be is predicted because of poor evaluation criteria.

On the other hand, to the best of our knowledge, NCS still has limited value in diagnosing of small fiber neuropathies. Electrophysiological findings of carpal tunnel syndrome, a well known pathology of the median nerve at the wrist can only be revealed in 75% of the patients with NCS because of small fiber damages.[3]

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Nerve conduction study has an ability to detect PNDs mostly in large fibers.[4] Damages in combined-small fibers may be overlooked, and we may have non-detectable patients with damage caused by the TRA angiography in the study.

In conclusion, authors concluded that the "TRA is a safe method in terms of PND".

Depending on the nature of the electrophysiological tests, we believe it is still early to determine whether these results are sufficient to tell it is safe or not. The use of more specific tests like Laser Evoked Potentials may help to identify possible nerve damage in these patients.[5]

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