



Editorial. Analysis of outcome reporting in common peroneal neuropathy studies: a systematic review of the literature

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The authors' systematic review of literature from 2000 to 2023 brings to light the diversity and inconsistency of outcomes reported in common peroneal neuropathy (CPN) studies [2]. While such diversity contributes to a richer understanding of CPN, it simultaneously hampers the direct comparison and compilation of results from different studies. This limitation underscores the urgency and relevance of the paper's call for a core outcome sets (COS), echoing the wider medical community's aspiration for a unified clinical metrics language.

In line with this, the authors' methodology harmonizes with another crucial aspect of managing peripheral nerve disorders: accurate problem localization. This involves a systematic and focused approach to diagnosis, which integrates patient history, physical examination, electrodiagnostic studies, and diagnostic imaging—each element vital for steering appropriate treatment. This “four legs of a table” strategy [6], applied to the evaluation of peripheral nerve disorders, serves as a metaphor for a robust and secure diagnosis (akin to a “solid table”), aligning perfectly with the stability a systematic, targeted approach to outcome reporting, facilitated by a unified COS, would provide for CPN studies.

The literature presents such “four legs” either individually or as a composite measure. The integration of a diverse range of outcome categories, including motor, sensory, and pain, could further be delineated into subcategory scores, offering a more granular pre- and post-treatment assessment. For instance, in the realm of motor function, while MRC motor grading remains a staple for assessing motor function in contemporary medicine, its application has proven increasingly inconsistent in specific scenarios such as CPN. Here, the precision of manual ankle dorsiflexion assessment

is often lacking [3]. The authors highlight alternative scales and tools, such as dynamometry or gait analysis, which could usher in a higher degree of standardization among practitioners. Evaluations of sensory function and pain are even more haphazardly assessed and reported, despite potentially serving as vital markers for early diagnosis and treatment. Structural high-resolution imaging, employing MRI or ultrasound, though inconsistently utilized, or reported, should be integral to the CPN assessment and reporting process, both pre- and, perhaps even, post-treatment.

Treatment strategies for CPN are closely intertwined with both the thoroughness of the assessment and the envisioned outcome. Traditional measures like the MRC grading might not bear significant meaning for the patient if they do not translate into a restoration or improvement of function. The goals and needs of patients are varied, ranging from basic ambulation to the demands of competitive athletics, or the pursuit of a certain level of autonomy. Consequently, it is essential to implement more complex, yet formalized, standardized, and validated metrics/tools. This is especially relevant for gauging function/disability through patient-reported outcomes and evaluating psychological outcomes. This extensive array of considerations underscores the multifaceted and complex nature of peripheral nerve disorders. It suggests that the ultimate realization of COS-COPE (Common PERoneal neuropathy) should indeed incorporate these diverse dimensions for a comprehensive understanding and study of CPN.

In this and preceding papers [1, 4], Dr. Wilson and colleagues have deftly charted a roadmap for future research, calling for consistency in reporting measures while acknowledging the inherent complexity of peripheral nerve disorders. We must appreciate that outcomes are not solely dictated by local effects but are also influenced by the brain's capacity to adapt to changes in peripheral anatomy. For instance, outcomes in nerve transfers (or tendon transfers) rely heavily on neural plasticity [5]. Therefore, it seems prudent as we design a separate holistic COS for nerve injuries

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of the lower limb (for example the common peroneal nerve) to consider other measures, including plasticity-dependent outcomes. This latest work further extends an invitation for collaboration and in-depth discourse on the development of COS in nerve surgery. Such development will undoubtedly augment the quality and value of future research in this field. This forward-thinking initiative, which typifies their persistent efforts in peripheral nerve disorder management, deserves heartfelt praise and recognition. Their contributions have undoubtedly set the stage for significant advancements in this challenging field of study.

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