AUKTORISOITUJEN KÄÄNTÄJIEN TUTKINTOLAUTAKUNTA ENGLANTI 13.12.2008
EXAMENSNÄMNDEN FÖR AUKTORISERADE TRANSLATORER ENGELSKA

LÄÄKETIEDE

Laadi käännös käräjäoikeuden siviilijuttua varten todistusaineistona plagiointiepäilysoikeudenkäynnissä

What are the limitations of diagnostic tests for peripheral neuropathy?

Routine neurophysiological examinations do not provide diagnostic clues in small fibre neuropathy. Sensory nerve conduction studies—usually performed on the sural nerve when investigating polyneuropathy—evaluate large myelinated fibres, which are typically normal in small fibre neuropathy. Finally, in some regions of the body, such as the trunk and the proximal limbs, sensory nerves are not superficial enough to be investigated by neurophysiological tests.

Quantitative sensory testing to detect thermal and pain thresholds has been used extensively to assess small fibre impairment. Studies have shown that an increased warm threshold correlates with skin denervation in small fibre neuropathy. However, this test requires patients to collaborate, and results should not be used as the sole criteria for diagnosing neuropathy. Laser evoked potentials and contact heat evoked potentials selectively excite C and Aδ fibres, and are theoretically useful for assessing their function, but need further evaluation and have limited clinical usefulness at present.

Sural nerve biopsy has long been used for the histopathological diagnosis of most peripheral neuropathies but this too has its limitations. It is an invasive procedure performed in the operating room, and it carries potential risks such as pain and permanent sensory loss distal to the biopsy site. Quantitative analysis of unmyelinated fibres is possible in the biopsy specimen but requires the use of an electron microscope, making it a difficult and time consuming procedure. Furthermore, unmyelinated C and thinly myelinated Aδ axons, which have either somatic or autonomic function, are enclosed in the bundles of the nerve and cannot be differentiated from one another, which limits the usefulness of this technique for diagnosing small fibre neuropathy. Finally, the biopsy cannot be repeated to monitor progress of the neuropathy except by using the opposite sural nerve.