

ARE SENSORY ELECTRODIAGNOSTIC PARAMETERS USEFUL IN DIFFERENTIATING AXONAL AND DEMYELINATING NEUROPATHIES?

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Introduction: Sensory electrodiagnostic (EDX) parameters are routinely measured but are hardly used to differentiate demyelinating neuropathies [AIDP+CIDP (DMN)] from non-DMN [(axonopathies (AX)+diabetic neuropathies(DN)]. There are conflicting reports on their utility in diagnosis of DMN.

Objectives: To assess if sensory EDX parameters were useful in differentiating DMN from non-DMN controls.

Methods: Clinico-demographic parameters of all newly diagnosed DMN, DN, AXP during 2010-2011 were obtained from the electronic database. Statistical Package for Social Sciences (SPSS 19®) was used to organize, validate and analyze data. Student's t-tests were performed in order to detect significant differences. Chi-Square or Fisher's exact test were used to identify difference or associations between categorical variables. ROC curves for selected tests were constructed using Med Calc software. A level of significance of 0.05 was selected for all test of hypothesis.

Results: There were 9 AIDP, 17 CIDP, 11 DN and 9 AX. 63% were males. 73% were Caucasians. Average age in years for AIDP was 53.3 and for CIDP were 59. Median nerve (MN) distal SNAP latency, MN SNAP duration, ulnar distal SNAP latency were statistically significant sensory markers for AIDP where as MN sensory CV and MN SNAP amplitude were significant markers for CIDP. Based on the ROC curves MN sensory CV of less than or equal to 47m/s attained a specificity of 88% (61.7 - 98.4) for CIDP and a sensitivity 72% (46.5 - 90.3).

Conclusion: Sensory EDX offers good specificity and might be useful marker for DMN when present.

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