Sensory nerve fibres are involved in amyotrohic lateral sclerosis

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Introduction: It is accepted that motor neurons invariably degenerate but sensory nerves are generally considered to be intact in ALS. However,in the last two decades, supportive arguments on sensory involvement in ALS came from both neurophysiological evaluations and pathological studies. In this study we assessed sensory involvement in ALS patients. Methods: Nerve conduction studies (NCS), somatosensory evoked potentials (SSEP), laser evoked potentials (LEP), and quantitative sensory testing (QST-at least 2 abnormal tests) were performed in 16 definite and 2 probable ALS patients based on Awaji criteria and 31 controls. In addition, skin biopsies were evaluated in ALS patients using quantification of intraepidermal nerve fiber density (IENFD). Results: The percentages of abnormal neurological examinations, NCS, SSEP, LEP, QST, and skin biopsies were 38.8%, 72.2%, 56.6%, 72.2%, 11.1% and 16.6%, respectively. Conclusions: Our study confirmed that sensory fibers are involved in ALS. The pattern of sensory involvement in ALS (myelinated sensory fibers are affected more than unmyelinated ones) is opposite to what we usually see in distal symmetric sensory polyneuropathies.