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Small Fiber Neuropathy in Patients with Chronic Pain and a Previous Diagnosis of Multiple Chemical Sensitivity Syndrome

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**Abstract**

Small fiber neuropathy (SFN) is characterized by the involvement of Aδ and C fibers leading to sensory, mainly pain, and/or autonomic symptoms. Multiple chemical sensitivity syndrome (MCS) is an incompletely defined condition characterized by the onset of various symptoms in patients after exposure to several chemical substances. Pain is a common symptom in these patients. In this study, we report the histological and clinical

data of a cohort of 21 patients who had been diagnosed as having MCS and who were referred to us with the suspicion of SFN because of chronic pain. All patients underwent neurological clinical examination, (including scales for pain and autonomic disorders), and a skin biopsy. Age-

matched healthy subjects were used as controls for the skin biopsies. Nerve conduction studies and serum screening to exclude possible causes of peripheral neuropathy were also performed. Skin biopsies disclosed a somatic SFN in all patients. Although the majority (18 out of 21) of patients

also had autonomic symptoms. we found sparing of autonomic innervation in the biopsies. These observations suggest that chronic pain in MCS could be secondary to the presence of somatic SFN, although more data are needed to confirm these observations.

**Keywords:** Chronic pain; Multiple chemical sensitivity syndrome; Skin biopsy; Small fiber neuropathy.

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