

Clinical Pain Medicine

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Multi-Microcramps Mimic Fibromyalgia, Other Chronic Pain Syndromes

by Andrew Wilner

Toronto—The newly described neurologic condition multi-microcramps syndrome may be prone to misdiagnosis, given its penchant for masquerading as other chronic pain syndromes, according to researchers at the recent annual meeting of the American Academy of Neurology.

"These patients present with an uneasy feeling. They can't get comfortable, have to keep moving, can't stand still," said W. King Engel, MD, professor of neurology and pathology, and director of the Neuromuscular Center of the University of Southern California, Good Samaritan Hospital, Los Angeles, in describing the clinical characteristics of this new syndrome. He added that it can be confused with other disorders such as chronic fatigue syndrome, fibromyalgia, restless legs syndrome or motor neuron disease, and also can appear to be psychogenic in nature. Strength and peripheral sensation are normal or minimally impaired; electromyography (EMG) and nerve conduction velocity studies are often normal, or may show a slight demyelinating neuropathy; and cerebrospinal fluid protein is normal or slightly high, he added. The microcramps are usually not visible on inspection, according to Dr. Engel, and the pathology is due to lower motor neuron hyperactivity.

According to Dr. Engel, diagnosis is important because treatment with the antiepileptic drug clonazepam can greatly benefit these patients. Additionally, treatment of an underlying pathology, such as a parathyroid adenoma, can relieve symptoms.

In the current study, presented in poster form (P05.232), Dr. Engel identified 22 therapeutically responsive patients with multi-microcramps syndrome. Of these patients, 16 had muscle biopsy, histochemistry, laboratory and electrical data. All of the biopsies showed recent denervation atrophy with small, dark, angular fibers and slight established reinnervation. Dr. Engel explained that denervation atrophy can result from anatomic disconnection or partial functional disconnection from myofibers of the neurotrophic stabilizing influence normally emitted by the lower motor neurons.

One of his patients, a 71-year-old man, was virtually housebound because of diffuse muscular pain, stiffness, micro- and macro-cramps and spasms. The patient described his symptoms as being "like a hard shell encapsulating my body." After treatment with clonazepam (at bedtime and on awakening), he had reduced painful spasms, was more flexible, able to walk farther, exercise, sleep better and go out to a restaurant for the first time in years.

Dr. Engel hypothesized that aberrantly firing lower motor neurons could produce microcramps and some myofiber atrophy without myofiber fibrillations, and with relatively preserved strength. "These firings produce the pervasive painful contractions of a few muscle fibers at a time in a myriad of foci, resulting in the chronic multi-microcramps syndrome," he said.

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microcramps syndrome," he said.

Kourosh Rezaia, MD, assistant professor of neurology, University of Chicago, has had numerous patients with symptoms similar to Dr. Engel's series. To identify patients with this syndrome, Dr. Rezaia checks everyone with symptoms of chronic fatigue and fibromyalgia for hyperparathyroidism.

"Dr. Engel presented this very interesting study regarding patients with vague musculoskeletal problems, which is a heterogeneous population," Dr. Rezaia commented. "Some of these patients had a peripheral neuropathy, and some did not. The most interesting finding is those patients who had an unrevealing EMG and were found to have primary hyperparathyroidism. Dr. Engel hypothesizes that the chronic myalgia in these patients is due to microcramps, either secondary to their neuropathy or due to nerve hyperexcitability, in the case of hyperparathyroidism."

Dr. Engel proposed that physicians who are seeing patients with unexplained painful muscle symptoms suggestive of restless legs syndrome or fibromyalgia should consider multi-microcramps syndrome as an alternative diagnosis. "A trial of low-dose clonazepam may be diagnostic," he said, with results in one or two nights, and "can provide patients with dramatic benefit."

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