MRN helps quantify peripheral nerve involvement in MS

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(HealthDay)—Patients with multiple sclerosis (MS) have peripheral

nerve involvement that can be visualized and quantified by high-resolution magnetic resonance neurography (MRN), according to a study published online Oct. 10 in the *Annals of Neurology*.

Johann M.E. Jende, M.D., from Heidelberg University Hospital in Germany, and colleagues compared 36 patients diagnosed with MS with and without disease-modifying treatment to 35 healthy age- and sex-matched volunteers. All patients underwent detailed neurological and electrophysiological examinations, and 3 Tesla MRN was performed.

The researchers found that all MS patients had T2w-hyperintense nerve lesions, with a mean lesion number at thigh level of 151.5±5.7 versus 19.1±2.4 in controls. Compared with controls, MS patients had higher nerve proton-spin-density (tibial/peroneal: 371.8±7.7/368.9±8.2 versus 266±11/276.8±9.7). Controls had significantly higher T2-relaxation time (tibial/peroneal: 82±2.1/78.3±1.7 versus 64.3±1/61.2±0.9). Compared with controls, MS patients had higher proximal tibial (52.4±2.1 versus 45.2±1.4 mm^2) and peroneal nerve caliber (25.4±1.3 versus 21.3±0.7 mm^2).

"Peripheral nerve lesions could be visualized and quantified in MS in vivo by high-resolution MRN," the authors write. "By showing involvement of the peripheral nervous system in MS, this proof-of-concept study may offer new insights into the pathophysiology and treatment of MS."

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More information: Abstract
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