SYSTEM RESEARCH: Researchers at State University of New York Target Neuroscience

05/07/2014 | 01:15pm US/Eastern  • Recommend: 0

By a News Reporter-Staff News Editor at Pain & Central Nervous System Week – Investigators publish new report on Nervous System Research. According to news reporting out of Buffalo, New York, by NewsRx editors, research stated, "Abnormalities in the gray matter (GM) of the brain parenchyma are present early in the course of multiple sclerosis. To quantify white matter (WM) and subcortical deep GM (SDGM) alterations in patients with clinically isolated syndrome (CIS) using diffusion tensor imaging (DTI)."

Our news journalists obtained a quote from the research from the State University of New York, "45 CIS patients and 52 healthy controls (HC) were scanned on 3 T MRI. Mean diffusivity (MD) and fractional anisotropy (FA) were calculated, in addition to the estimation of structural brain volume and lesion measurements. FA was significantly lower in CIS patients in the whole brain (p < 0.001), total SDGM (p < 0.001), normal appearing (NA) GM (p = 0.016), thalamus (p = 0.029) putamen (p = 0.036), caudate (p = 0.041) and accumbens nuclei (p = 0.041) compared to HC. No DTI MD or volumetric differences were detected in the brain parenchyma between CIS and HC groups. Normalized lateral ventricular volume was higher in CIS patients compared to HC (p = 0.033). A significant association was detected between the increased T2 lesion number and volume and decreased FA of the NAWM (p = 0.036), but not with FA of NAGM or SDGM structures."

According to the news editors, the research concluded: "Diffuse DTI alterations of GM structures, not associated with lesion formation, are present in CIS patients."

For more information on this research see: Diffusion tensor MRI alterations of subcortical deep gray matter in clinically isolated syndrome. *Journal of the Neurological Sciences*, 2014;338(1-2):128-134. *Journal of the Neurological Sciences* can be contacted at: Elsevier Science Bv, PO Box 211, 1000 Ae Amsterdam, Netherlands. (Elsevier - www.elsevier.com; Journal of the Neurological Sciences - www.elsevier.com/wps/product/cws_home/506078)

Our news journalists report that additional information may be obtained by contacting R. Cappellani, SUNY Buffalo, Jacobs Neuril Inst, Dept. of Neurol, Buffalo, NY 14260, United States. Additional authors for this research include N. Bergsland, B. Weinstock-Guttman, C. Kennedy, E. Carl, D.P. Ramasamy, J. Hagemeier, M.G. Dwyer, F. Patti and R. Zivadinov (see also *Nervous System Research*).

Keywords for this news article include: Buffalo, New York, United States,Nervous System Research, North and Central America

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