DTI FINDINGS IN IDIOPATHIC NORMAL PRESSURE HYDROCEPHALUS

Eftychia Kapsalaki, Ioannis Siasios, Ioannis Tsougos, Efthymios Daridiotis, George hutziegiorgiou, Kostas Fountas
University of Thessaly, Larissa, Greece

PURPOSE
Idiopathic Normal pressure hydrocephalus (iNPH) constitutes a treatable cause of dementia. However, its accurate diagnosis remains puzzling. The purpose of our study is to apply Diffusion Tensor Imaging (DTI) in order to differentiate iNPH from other white matter pathology.

MATERIAL AND METHODS
Twenty patients aged 50-80 yo (mean 67) with a dilated ventricular system (Evans index>3) and 20 normal aged-matched volunteers underwent a 3 Tesla MRI scanner. Axial T2, FLAIR, T2*, DWI and DTI (32 directions) were obtained. Mean diffusivity (MD) and Fractional Anisotropy (FA) were measured at the corpus callosum, and the periventricular white matter (PVWM). Twelve patients had clinical symptoms compatible with iNPH. A CSF tap test was performed on all these patients.

RESULTS
Compared to normal volunteers, all patients with dilated ventricular system showed an overall increased MD in the PVWM. Patients with clinically proven iNPH showed increased MD in the PVWM, and the CC. Regarding FA, in the 12 patients with clinical iNPH, 9 showed normal FA in the PVWM, and 3 showed decreased FA in the PVWM and the CC. The CSF tap test showed improvement of the symptoms in all but the 3 patients with decreased FA. Interestingly, in 3 patients without clinical iNPH, FA was also decreased in the PVWM but not at the CC.

CONCLUSIONS
MD may be increased in iNPH as well as in other pathologies. However, reduction of FA is associated with more permanent changes, suggesting irreversible damage in patients with iNPH.

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HOT CROSS BUN SIGN IS USEFUL TO DIFFERENTIATE PARKINSON DISEASE FROM MULTIPLE SYSTEM ATROPHY

Shalini Rajandran Nair, Norlisa Ramli, Kartini Rahmat, Hazman Mohd-Nor, Li-Kuo Tan, Shen-Yang Lim
University Malaya, Kuala Lumpur, Malaysia

BACKGROUND AND PURPOSE
Differentiating Parkinson disease (PD) and multiple system atrophy (MSA) remains a clinical challenge. The 'hot cross