

**High-resolution susceptibility weighted MR venography: initial clinical experience**

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**목적:** Susceptibility weighted imaging (SWI) that is a new high-resolution magnetic resonance imaging can visualize small veins in the human brain with diameters in the sub-millimeter range, which is smaller than a voxel. SWI is not a flow-related MRI method but a method based on the paramagnetic property of deoxyhemoglobin and the resulting phase difference between veins and brain parenchyma at long echo times

**대상 및 방법:** Magnitude and phase imaging with 0.5mm<sup>3</sup> resolution is acquired using 3.0T MRI system. To increase the visibility of the small venous structure, the phase mask filter is multiplied 2-5 times with the corresponding magnitude images. Venous information down to sub-voxel vessel diameter of a few hundred microns is visible. Venous data are displayed in an angiographic manner using a minimum intensity projection algorithm

**결과:** The method has been successfully applied in some volunteers and patients with various disease. SWI showed fine cross-sectional image of both superficial veins and deep white matter veins, and show unique findings of various cerebral diseases. SWI presented the cross-sectional anatomies of cerebral veins with sub-millimeter diameter, and this has not been provided by other MR sequence.

**결론:** In this exhibit, we illustrated some clinical experiences of susceptibility weighted MR venography.