

Half Fourier T2 weighted EPI

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목적(Purpose): An efficient way of half Fourier echo planar imaging method is proposed with a flexible adjustment of echo time. The proposed method acquires only two quadrant data in Fourier domain, so that measurement time can be reduced by a factor of 2. Maximally symmetrical echo arrangement is maintained, so that the Gibb's artifact is minimized. In order to eliminate frequency offset induced by eddy current, a new correlation between dc and reference data is proposed.

대상 및 방법(Materials and Method): The proposed technique is applied to head imaging of volunteers. Some preparation pulses are also incorporated into the technique, e.g., inversion recovery EPI. Some experimental results are shown to demonstrate the efficacy of the proposed technique.

결과(Results): Good quality of EPI images are obtained at 1.0 Tesla and 3.0 Tesla systems with high T2 contrast. Acquisition time is reduced by the half Fourier imaging, which reduces inhomogeneity effect or enhances spatial resolution. The proposed correlation method works well to remove dc offset by the eddy currents.

결론(Conclusion): The proposed half Fourier T2 weighted EPI is an efficient method to obtain T2 contrast incorporated with ultra fast imaging. It can enhance spatial resolution or reduce inhomogeneity effect by acquiring half Fourier domain data. Flexible adjustment of effective echo time yet maintaining symmetric echo arrangement is useful features of the technique.