Magnetization Transfer Using Inversion Recovery

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Technology description

An improved MRI pulse sequence and post processing technique have been developed that dramatically improve MT imaging while improving safety by reducing specific absorption rate (SAR), which is a measure of tissue heating. Clinical usage of magnetization transfer (MT) imaging with MRI scanners has been limited due to radio frequency (RF) heating of the subject, which ultimately limits the sensitivity and specificity of the technique for diagnosis. Inversion recovery combines a conventional pulse with an inversion pulse, which flips the orientation of the magnetization by 180 degrees. By including the ΓÇ£negative dataΓÇØ, a larger dynamic range is available to accurately calculate the magnetization transfer exchange rate constant with reduced deposition of RF energy in the subject. The MT imaging MRI pulse sequence and post processing is implemented in software on an MRI scanner.

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