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Brain magnetic resonance imaging (MRI) in parkinsonian disorders.

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Abstract

Magnetic resonance imaging (MRI) is increasingly integrated into neurological diagnostics. In addition to functional MRI, a large number of sequences (T1W, T2W, PD, T2W gradient echo, diffusion-weighted imaging (DWI), and diffusion tensor imaging (DTI)), investigate CNS abnormalities. Objective quantification techniques (T1W voxel-based morphometry) can also discern subtle anatomical differences. Parkinsonian conditions such as Parkinson's disease, multiple system atrophy, progressive supranuclear palsy, corticobasal degeneration and manganese-induced parkinsonism can clinically overlap, yet have very different prognoses and treatments. Relatively little radiographic interest has focused on movement disorders. Nevertheless in the past decade, a variety of findings, often subtle and routinely overlooked, have emerged to help the clinician differentiate these conditions. This review will summarize and discuss MRI findings in parkinsonian conditions. Most data concern either structural abnormalities or the imaging sequelae of abnormal iron deposition, common in some parkinsonian conditions.

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