



Novel neuroimaging technique to study Parkinson's disease

Diagnosis of Parkinson's disease is mostly clinical. As a result, it is difficult to make an accurate diagnosis at an early stage. Because of the subjective nature of clinical diagnosis, many patients are misdiagnosed at an early stage. Because of this, treatment gets delayed and the disease progression cannot be slowed down. It is therefore important to have a diagnostic technique that helps us make an early diagnosis. A new imaging technique that we recently developed could be useful. The technique called single scan dynamic molecular imaging technique (SDMIT) uses positron emission tomography (PET) to detect, map and measure dopamine released acutely during a cognitive or behavioral processing. It exploits the competition between dopamine and its receptor ligand for occupancy of the same receptor site. In this technique after patients are positioned in the PET camera, a radio-labeled dopamine ligand is injected intravenously and the PET data acquisition started. These data

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