Combined findings of FDG-PET and arterial spin labeling in sporadic Creutzfeldt-Jakob disease

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Abstract

Background: Sporadic Creutzfeldt-Jakob disease (sCJD) is a fatal progressive neurodegenerative disease. Multimodal approaches, including electroencephalogram, diffusion-weighted imaging (DWI) of brain MRI, and cerebrospinal fluid biomarkers, have been applied to increase the diagnostic accuracy of sCJD. Although previous studies suggested DWI could be the most useful modality for sCJD diagnosis, whether metabolism changes underlying in sCJD are still poorly understood. To the best of our knowledge, there are only one case using the technique of arterial spin labeling (ASL) to detection and follow-up of perfusion changes in CJD.

Method: Herein, we described a 71-year-old woman presented with progressive cognitive decline, behavioral and psychological symptoms for two months. The patient died one month later after her admission.

Result: As far as we know, this is the first report using the combination of fluorodeoxyglucose positron emission tomography and ASL to explore the metabolism changes in sCJD.

Conclusion: Our case exemplifies the difficulty clinicians may face in the diagnosis of sCJD.
FIGURE 1

FIGURE 2
FIGURE 3