**Supplementary Data**

Comparison of Regions without Histopathological Changes and without FDG-PET Hypometabolism

Neuropathology evaluation revealed that a total of 40 regions were normal (8 cortical, 32 subcortical; Table 2). Of the 8 cortical regions identified as normal in histopathology, 4 of these regions had absence of hypometabolism on FDG-PET. All but 1 of the 32 subcortical locations identified as normal by histopathology had absence of FDG-PET hypometabolism. Table 2 shows the proportion and percentage of regions in which there is normal histology associated with absence of FDG-PET hypometabolism.

Table 1: Regions with Absence of Histopathological Changes and Absence of FDG-PET Hypometabolism

|  |  |
| --- | --- |
| Region | Proportion of Regions without FDG-PET Hypometabolism to Regions without Histopathological Changes |
| Cortical Regions | 4/8 (50%) |
| Frontal | 1/2(50%) |
| Temporal | 2/2 (100%) |
| Parietal | 0/2 (0%) |
| Occipital | 1/2 (50%) |
| Subcortical Regions | 31/32 (96.9%) |
| Basal Ganglia | 3/3 (100%) |
| Thalamus | No cases |
| Hippocampus | 7/7 (100%) |
| Midbrain | 7/7 (100%) |
| Brainstem | 7/7 (100%) |
| Cerebellum | 7/7 (100%) |

Comparison of FDG-PET and MRI

Table 2 displays the results for cases where PET revealed presence of hypometabolism. Of the 33 cortical regions that PET indicated hypometabolism, 17 (51.5%) had DWI hyperintensity. Conversely, of the 7 subcortical locations where PET revealed hypometabolism, only 2 (28.6%) cases had hyperintensity on DWI. Note that some locations had no cases where PET indicated hypometabolism.

The mixed-effects logistic regression model revealed a positive and statistically significant relationship between FDG-PET hypometabolism and DWI hyperintensity. After adjusting for the effects of cortical vs. subcortical region and the correlated responses within each patient, the odds of a case having hypometabolism on PET were about 4.2 times greater when there was DWI hypertensity as opposed to a normal MRI reading (95% confidence interval = 1.3 to 14.7, P = 0.021).

Table 2: Regions with DWI Hyperintensity and FDG-PET Hypometabolism

|  |  |
| --- | --- |
| Region | Proportion of Regions with DWI Hyperintensity to Regions with FDG-PET Hypometabolism |
| Cortical Regions | 17/33 (51.5%) |
| Frontal | 4/8(50%) |
| Temporal | 5/5 (100%) |
| Parietal | 7/11(63.6%) |
| Occipital | 1/9 (11.1%) |
| Subcortical Regions | 2/7 (28.6%) |
| Basal Ganglia | 2/2(100%) |
| Thalamus | 0/3 (0%) |
| Hippocampus | No cases |
| Midbrain | No cases |
| Brainstem | No cases |
| Cerebellum | No cases |