|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Study** | **Gender** | **Age** |  |  | **SPECT** | **PET** |   |
|   |   |   | **SPECT** | **PET** | Abnormality | Amelioration after relief of symptoms | Frontal | Occipital | Temporal | Parietal | Thalamus | Striatum | Basal ganglia | Abnormality | Amelioration after relief of symptoms | Frontal | Occipital | Temporal | Parietal | Basal ganglia | Thalami | Cerebellum | Hippocampus | Brain stem | Diagnosis |
| Alberdi, 2011 | M | 16 |  | **x** |  |  |  |  |  |  |  |  |  | **x** |  | **x** |  |  | **x** |  |  |  |  |  | Lupus |
| Bica, 2015 | F | 26 |  | **x** |  |  |  |  |  |  |  |  |  | **x** |  | **x** |  |  | **x** |  | **x** |  |  |  | Lupus |
| Brasic, 1999 | M | 23 |  | **x** |  |  |  |  |  |  |  |  |  | **x** |  | **x (r)** |  | **x** | **x** | **x (r)** |  | **x** |  | **x** | None |
| Breker, 2013 | M | 19 |  | **x** |  |  |  |  |  |  |  |  |  | **x** |  |  |  |  |  |  | **x** |  | **x** |  | None |
| Carrol, 2005 | M | 69 | **x** |  | **x** |  |  |  |  | **x (l)** |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Vascular dementia |
| Cheong, 2007 | F | 42 | **x** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Mothball withdrawal encephalopathy |
| Dranovsky, 2014 | M | 20 |  | **x** |  |  |  |  |  |  |  |  |  | **x** |  |  |  | **x** |  |  | **x** | **x** |  |  | Hypoventilation syndrome |
| Ducharme, 2015 | M | 55 |  | **x** |  |  |  |  |  |  |  |  |  | **x** |  | **x** |  | **x** | **x** |  |  |  |  |  | Bipolar disorder |
| D'Urso, 2012 | M | 37 | **x** |  | **x** | **x** | **x** |  |  |  | **x** |  |  |  |  |  |  |  |  |  |  |  |  |  | Obssessive Compulsive Disorder |
| Galynker, 1997 | F | 40 | **x** |  | **x** | **x** | **x** |  | **x** | **x** |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Schizophrenia |
| Ghaziuddin, 2002 | F | 17 | **x** |  | **x** |  |  |  | **x (l)** | **x** |  |  | **x (r)** |  |  |  |  |  |  |  |  |  |  |  | NMS |
| Hennings, 2008 | M | 27 |  | **x** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Mental retardation |
| Iseki, 2009 | M | 32 | **x** |  | **x** | **x** | **x** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | None |
| Isomura, 2013 | F | 69 | **x** | **x** | **x** | **x** | **x** |  | **x** |  |  |  |  | **x** | **x** | **x** |  | **x** |  |  |  |  |  |  | Fronto-temporal dementia |
| Ito, 2011 | F | 63 | **x** |  | **x** | **x** | **x** |  |  | **x** |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Pachymeningitis |
| Jauhar, 2010 | F | 27 | **x** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Vitamin B12 deficiency |
| Jensen, 2015 | M | 35 | **x** |  | **x** (inflammation) | **x** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Anti-NMDAr Encephalitis |
| Kaestner, 2008 | M | 40 |  | **x** |  |  |  |  |  |  |  |  |  | **x** | **x** | **x** |  | **x (l)** |  |  |  |  |  | **x** | Paraneoplasic syndrome |
| Kopala, 1998 | M | 18 | **x** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Schizophrenia |
| Maeda, 2011 | F | 76 | **x** |  | **x** | **x** | **x** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Dementia with Lewy Bodies |
| Mendez MF. | M | 29 |  | **x** |  |  |  |  |  |  |  |  |  | **x** |  | **x** | **X** | **x** | **x** |  |  |  |  |  | Multiple sclerosis |
| Mon, 2012 | F | 15 |  | **x** |  |  |  |  |  |  |  |  |  | **x** |  | **x** | **X** | **x** | **x** |  |  |  |  |  | Lupus |
| Pérez-Esparza 2018 | F | 21 |  | **x** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Valproate-induced Hyperammonemic Encephalopathy |
| Satoh, 1993 | M | 24 | **x** | **x** | **x** |  |  |  |  | **x** |  |  |  | **x** |  | **x** |  |  | **x** |  |  |  |  |  | Schizophrenia |
| Serat, 2015 | M | 27 | **x** |  | **x** | **x** | **x** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Schizophrenia |
| Sheikhi, 2015 | F | 61 |  | **x** |  |  |  |  |  |  |  |  |  | **x** |  | **x** | **x** | **x** | **x** |  |  |  |  |  | Fronto-temporal dementia |
| Slooter, 2005 | F | 13 | **x** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | None |
| Smith, 2012 | M | 68 |  | **x** |  |  |  |  |  |  |  |  |  | **x** |  | **x** |  | **x** | **x** |  |  |  |  |  | Fronto-temporal dementia |
| Smith, 2012 | M | 73 |  | **x** |  |  |  |  |  |  |  |  |  | **x** |  | **x** |  | **x** |  |  |  |  |  |  | Fronto-temporal dementia |
| Trojak, 2014 | M | 45 |  | **x** |  |  |  |  |  |  |  |  |  | **x** |  | x (medial OFC) |  |  |  |  |  |  |  |  | Schizophrenia |
| Tsujino, 2011 | F | 64 | **x** |  | **x** | **x** | x (l) - hyperperfusion |  | x (l) - hyperperfusion |  | **x** | **x** |  |  |  |  |  |  |  |  |  |  |  |  | Schizophrenia |
| Van der Gucht, 2016 | M | 67 | **x** |  |  |  |  |  |  |  |  |  |  | **x** |  |  | **x** |  |  |  |  |  |  |  | Psychotic depression |
| Vancaester, 21007 | F | 49 |  | **x** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Dementia with Lewy Bodies |
| Yasaki, 2013 | F | 66 | **x** |  | **x** |  |  | **x** | **x** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | None |

**Supplementary Table 2**. Focus on case reports published about catatonia using functional brain imaging. (r) = right; (l) = left.