



**Supplementary Figure 1.** Flowchart of the study patients. Patients with genetically confirmed PKAN with a clinical diagnosis of neurodegeneration with brain iron accumulation (NBIA) who received bilateral GPI-DBS for moderate to severe medically intractable dystonia were eligible for the study. Patients who were evaluated for BFMDRS-M score by a movement disorder specialist before surgery and had information available regarding clinical status after DBS implantation for  $\geq 2$  years postoperatively were included. GPI-DBS, globus pallidus internus deep brain stimulation; PKAN, pantothenate kinase-associated neurodegeneration; SNUH, Seoul National University Hospital; AMC, Asan Medical Center; BFMDRS-M, Burke–Fahn–Marsden Dystonia Rating Scale motor subscale.