

Table e-1. Variants of Alien Hand Syndrome.

Variant	Main features	Associated features	Common etiologies
Frontal (wayward, “pseudo-alien”)	“Frontal” alien hand syndrome: grasping reflex, manual groping, and utilization behavior of the <i>contralateral</i> hand	Groping, grasping and utilization behaviors are “disobedient” or “wayward” but not truly alien.	Medial frontal, supplementary motor cortex or anterior callosum (tumors, left ACA stroke)
Callosal	Intermanual conflict and manual interference of the usually of the <i>contralateral</i> hand	Other disconnection syndromes: ideomotor apraxia, tactile anomia, and agraphic aphasia	Callosotomy, callosum demyelination (multiple sclerosis, Machiafava–Bignami syndrome), tumors (lipomas, gliomas, lymphoma)
Posterior (“classic” alien)	“Sensory” alien hand syndrome: withdrawal or avoidance of the <i>contralateral</i> hand	Hemianesthesia, anosognosia, hemianopia, dystonia, cortical sensory loss, and “triple ataxia” in some*	Parieto-occipital region lesions (AD, DLB, CBD, CJD and PCA-distribution strokes)

*The posterior alien hand may be associated with “triple ataxia” in patients with extensive PCA-distribution stroke: sensory ataxia (involvement of the ventral posterolateral thalamus), cerebellar ataxia (lesion of dentatorubrothalamic tract), and optic ataxia (damage to the splenium and occipital cortex). AD: Alzheimer’s disease; CBD: corticobasal degeneration; CJD: Creutzfeldt-Jakob disease; DLB: dementia with Lewy bodies; PCA: posterior cerebral artery.