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Educational Abstract

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Alien Hand Syndrome: A peculiar challenge in stroke rehabilitation

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Learning Objective: Alien hand syndrome is a commonly missed phenomenon that occurs infrequently after stroke. We describe the different signs and symptoms of alien hand syndrome and try to correlate them with different locations of the stroke lesions.

Background: The alien hand sign is defined as a feeling when the affected hand feels foreign or " has a will of its own" *together* with observable autonomous motor activity.

Findings: We report three stroke patients who presented with alien had signs, all three resulting from anterior circulation infarcts. In the first case our patient could not control his right hand and wouldn't let go of his son's hand even when the child try to shake his hand off. In our second case the patient displayed bimanual conflict as the affected left hand would turn off the tap immediately after he turns it on with his right hand. In the third case our patient felt that his hand had 'a mind of its own' and would compulsively stir any cup with a spoon in it. Patients with the frontal variant exhibited grasping or utilization behaviour whereas the callosal variant demonstrated features of diagnostic dyspraxia. Through neuroimaging we identified the described symptoms were due to infarcts at the supplementary motor area, cingulate cortex and the corpus callosum. All three patients progressed favourably in terms of ADL at 6 months post stroke.

Conclusion: Early diagnosis and prompt multi-disciplinary rehabilitation intervention allows significant functional improvement in patients with alien hand syndrome.