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Aggressive Behavior and Posterior Cerebral Artery Stroke

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Objective To describe the mechanisms leading to aggressive behavior among patients with acute posterior cerebral artery stroke.

Design, Setting, and Patients We prospectively included all of the patients with posterior cerebral artery stroke and aggressive behavior admitted to our department from January 1, 2003, to December 31, 2004. Patients with history of stroke, cognitive impairment, or prior history of psychiatric disease were excluded.

Results Aggressive behavior was found in 3 patients (7.3%) among 41 patients with posterior cerebral artery stroke. One patient had right occipitotemporal and ventrolateral thalamic stroke. The second patient had left occipitotemporal and lateral thalamic stroke. The third patient had right isolated occipital stroke. In addition to a contralateral homonymous hemianopsia, the patients, who were physically and emotionally balanced before the stroke, suddenly manifested an acute, unusual, aggressive behavior. The patients became agitated and aggressive when they were stimulated by the environment, and they responded to solicitations by their relatives or medical personnel by shouting obscenities and hitting and biting others. In all of the 3 cases, temporary physical restraint was required and neuroleptics were administered. This unusual behavioral pattern resolved within 2 weeks after stroke.

Conclusions Aggressive behavior is a rare presentation of acute posterior cerebral artery stroke, which may be difficult to diagnose in patients presenting with hemianopsia as the only concomitant neurological sign. The postulated mechanisms include dysfunction of the limbic or serotonergic system.

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