



## Increased Cerebral Cortex Perfusion in Stroke Patients with Cognitive Disorder Following Cilostazol Administration, Two Cases Report

PDF (Size: 232KB) PP. 357-361 DOI: 10.4236/nm.2012.34043

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### ABSTRACT

**Objective:** In our search for a new augmentation therapy for stroke patients, we administered cilostazol, an antiplatelet agent. **Subjects:** The patients suffered from mild hemiparesis or cognitive disorder showing reduced cerebral perfusion in the prefrontal cortex. **Methods:** We evaluated the functional cerebral blood flow (CBF) before and after the administration of cilostazol using near-infrared resonance spectroscopy (NIRS) during a verbal fluency task (VFT). **Results:** For the patient with cognitive disorder, statistically significant improvements were observed in the number of generated words in the VFT before and after administration of 50 mg cilostazol ( $p < 0.05$ , Mann-Whitney U test). Another patient without cognitive disorder, however, showed no significant VFT improvement after administration of cilostazol. Effect size data revealed large or very large effects of cilostazol on brain activation (oxy-Hb levels) at the affected side prefrontal cortex for both patients. The patient with cognitive disorder showed significant improvement in VFT performance as well as an increase in bilateral prefrontal CBF after cilostazol administration. **Discussion:** These findings suggest that, for patients with cerebrovascular lesions suffering from cognitive disorder, cilostazol may be promising as a drug to improve cognitive function in addition to preventing recurrent cerebral infarction.

### KEYWORDS

Stroke; Cognitive Disorder; Brain Perfusion; Antiplatelet Drug; NIRS

### Cite this paper

Y. Hara and S. Obayashi, "Increased Cerebral Cortex Perfusion in Stroke Patients with Cognitive Disorder Following Cilostazol Administration, Two Cases Report," *Neuroscience & Medicine*, Vol. 3 No. 4, 2012, pp. 357-361. doi: 10.4236/nm.2012.34043.

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