Clinical Factors Associated with Significant Carotid Artery Stenosis in Thrombotic Stroke Patients

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Background: Severe carotid atherosclerotic stenosis is known to be associated with an increasing risk of ischemic stroke and recurrent stroke.

Objective: This study aimed to define cerebrovascular clinical factors associated with the severity of carotid atherosclerosis. The data may provide new insights into the potential mechanisms promoting artery atherosclerosis and would be helpful in the prevention of carotid artery disease.

Methods: A retrospectively matched case-control study was performed in adult patients (aged>18 years) who were diagnosed thrombotic stroke from July 2011 to January 2017 at Srinagarind Hospital, Khon Kaen University. This case study was significant ≥ 70 % ICA stenosis performed by ultrasound compared with non significant stenosis. Multivariate logistic regression analysis was used to identify clinical risk factors.

Results: Of 124 patients with thrombotic stroke, significant ICA stenosis was found in 31 patients (match case-control 3:1). There were 4 clinical risk factors including: 1) Dysarthria (adjusted OR 0.169, P =0.022), 2) Blood sugar (adjusted OR 1.009, P =0.020), 3) Hct (adjusted OR 0.845, P =0.012), and 4) Carotid bruit (adjusted OR 20.582, P =0.001), with statistically associated with significant ICA stenosis in patients with thrombotic stroke.

Conclusion: The prevalence of carotid artery stenosis in thrombotic stroke in Srinagarind Hospital is significant. Dysarthria, blood sugar, hct, and carotid bruit are significant clinical risk factors.

Keywords: Carotid artery stenosis, Thrombotic stroke patients, Prevalence, Risk factors, Srinagarind Hospital