Intracranial Arterial Calcifications Can Reflect Cerebral Atherosclerosis Burden

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Abstract

Background and Purpose We investigated whether the intracranial arterial calcification status reflects the overall cerebral atherosclerosis burden. Methods Patients with acute cerebral infarction who were admitted to a single university hospital stroke center and underwent brain computed tomography angiography (CTA) between May 2011 and December 2015 were included. We reviewed their demographic, clinical, and imaging data. Cerebral artery calcification was assessed from the cavernous portion of both internal carotid arteries, and patients were categorized into three groups according to the calcification status. The cerebral atherosclerosis score was calculated as the sum of the degree of stenosis of the major intracranial and extracranial arteries on brain CTA. Results In total, 1,161 patients were included (age=67±13 years, mean±standard deviation), of which 517 were female. Intracranial arterial calcification and atherosclerosis were detected in 921 patients. The cerebral atherosclerosis score tended to increase with the calcification status (no calcification=2.0±3.0, mild=3.8±3.8, severe=6.5±4.8.

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Biography

Kwang-Yeol Park, MD is a full professor at Chung-Ang University, China.