Perfusion CT Proves Useful In Carotid Artery Stenosis

BY PATRICE WENDLING
Chicago Bureau

CHICAGO — Perfusion computed tomography is a useful modality in the detection and quantification of regional cerebral ischaemia in patients with severe internal carotid artery stenosis, Dr. Agnieszka Trojanowska said at a cardiovascular imaging conference sponsored by the American College of Cardiology.

Not all stenoses detected on angiography are associated with brain perfusion deficits, said Dr. Trojanowska, who also has a PhD.

Four patients with symptomatic internal carotid artery stenosis of more than 70% were evaluated with CT perfusion imaging, on average, 70 hours before carotid stent placement and then 3 days and 6 months after stent placement.

The protocol included a non-contrast transaxial CT of the brain with a 5-mm slice and 5-mm slope and dynamic CT perfusion imaging with administration of 50 mL of contrast medium at 4 mL/s with a 5-second delay.

Before stent placement with embolic protection devices, 84% of patients had perfusion deficits ipsilaterally to the stenotic site. Three days after stent placement, 30% of patients had perfusion deficits, and at 6 months, the deficits had diminished to 6%, said Dr. Trojanowska of the Medical University of Lublin (Poland).

A marked elongation of the mean transit time (6.2-6.8 seconds) was noted at the perfusion deficits ipsilaterally to the stenotic site. Three days after stent placement and then 3 days and 6 months after stent placement.

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