

DEBATE: SHOULD TREATMENT OF ACUTE STROKE BE THE SAME FOR ANTERIOR AND POSTERIOR CIRCULATION STROKES: YES POSITION

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The anterior and posterior circulation is fed by the same blood under the same blood pressure contained in arteries composed of the same constituents. Why would anyone propose that vascular events in the two circulations would be substantially different? The answer relates to the history of evaluation of patients. Advanced brain and vascular imaging of the posterior circulation brain and supply arteries using MRI and MRA was not in common use until nearly 2 decades ago. Studies using these modern imaging modalities clarified the major vascular lesions and mechanisms in patients with posterior circulation ischemia. While CT scanning and ultrasound techniques- in use for over 30 years- were effective in studying patients with anterior circulation disease, they were much less useful in patients with Vertebro-basilar lesions.

The New England medical center Posterior Circulation Stroke registry documented the usual stroke mechanisms and vascular lesions among 407 consecutive fully evaluated patients with Vertebro-basilar ischemia. The stroke mechanisms in patients with posterior circulation ischemia were very similar to those shown in prior studies in anterior circulation disease patients except for a slightly higher frequency of penetrating artery lesions and a slightly higher frequency of large artery occlusive disease. The location of atherosclerotic vascular lesions and dissections is similar in the two circulations. There is absolutely no reason to consider different treatments. Therapy is aimed at the specific stroke mechanism and vascular lesion present in each individual patient irrespective of whether the anterior or posterior circulation is involved.