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Background and purpose - We intended to establish transcranial Doppler (TCD) criteria to quantify extracranial internal artery stenosis (ICA) in order to identify severe disease.

Methods - TCD and Duplex criteria were compared in two groups divided according to NASCET angiographic degree of stenosis as over and under 70%. One TCD criterion, the upstroke time fraction (UST-F), was designed to quantify flow acceleration.

Results - UST-F identified the severe stenosis group, though failed to differentiate occluded ICA.

Conclusion - TCD is reliable to identify severe stenosis in ICA, but not occlusion. Since ICA occlusion is identifiable by Duplex, the combination of TCD and Duplex can refer surgical treatment according to NASCET standards.

KEY WORDS: Ischemic stroke, transcranial Doppler sonography, diagnosis.


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