Comparison of centralized versus "site-based" measurement of angiographic stenosis for eligibility in the asymptomatic carotid atherosclerosis study.

RATIONALE AND OBJECTIVES: The authors determine the reliability of centralized versus noncentralized (site-based) measurement of angiographic stenosis of patients enrolled into the multicenter, prospective, Asymptomatic Carotid Atherosclerosis Study by angiographic studies.

METHODS: Percent agreements and correlations of 244 masked and prospectively interpreted angiograms were calculated for comparison of centralized and noncentralized readers measuring the percent carotid stenosis from the same angiographic studies. Univariate summary statistics for differences in percent stenoses were calculated for these readings.

RESULTS: Agreement between readings were 88.5% and 91.8% with kappa statistics of 0.77 and 0.73 for > or = 60% and > or = 80% stenosis, respectively, for comparison of 33 centers to the designated central reader. Comparison between the designated central reader and a second central reader derived percent agreements of 85.0% and 86.5% with kappa statistics of 0.69 and 0.41 for > or = 60% and > or = 80% stenoses, respectively, for arteries selected from the original group. Hence, agreement was slightly better between the enrolling centers and the designated central reader than between the two central readers.

CONCLUSIONS: Both centralized and noncentralized (site-based) methods of
Comparison of centralized versus "site-based" measurement of angiographic stenosis for eligibility in the asymptomatic carotid atherosclerosis study.

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Angiographic measurement of stenosis are equally reliable for large, prospective, masked, multicenter trials when quality control measures are instituted to ensure uniform application of eligibility criteria.

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