Level of Agreement Between Diagnostic Peripheral Angiography and a Systematic Doppler Examination in the Setting of Lower Extremity Peripheral Arterial Disease.

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Purpose: The purpose of this article is to review the level of agreement between diagnostic peripheral angiography and a systematic Doppler examination of the feet and ankles in the setting of lower extremity peripheral arterial disease. The hypothesis was that performing a systematic Doppler assessment of the lower extremities would improve the patient’s ability to diagnose peripheral arterial disease and would reduce the number of arterial interventions performed.

Methods: A retrospective chart review of 17 lower extremity extremities was performed. Two experienced reviewers performed a systematic Doppler examination of the feet and ankles using a standard protocol. Diagnostic peripheral angiography was performed on the same extremities. The level of agreement between the systematic Doppler examination and the diagnostic peripheral angiography was calculated using the kappa statistic.

Results: The overall level of agreement between the systematic Doppler examination and the diagnostic peripheral angiography was 0.70 (95% CI: 0.51-0.89), indicating a substantial level of agreement. The agreement with respect to arterial flow direction ranged from 70.6% to 76.5%. We interpret these results to mean that a systematic Doppler examination of the feet and ankles in the setting of lower extremity peripheral arterial disease can be used as a screening tool for peripheral arterial disease.

Discussion: We conclude that a systematic Doppler examination of the feet and ankles in the setting of lower extremity peripheral arterial disease can be used as a screening tool for peripheral arterial disease. This tool can be used to reduce the number of arterial interventions performed and can improve patient outcomes.

References