Inter-rater Agreement Analysis of the Precise Diagnostic Score (PREDISC) for suspected TIA

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Background and Purpose—No definitive criteria are available to confirm the diagnosis of transient ischemic attack (TIA). Inter-rater agreement between physicians regarding the diagnosis of TIA is low, even among vascular neurologists. We developed the Precise Diagnostic Score (PREDISC), a diagnostic score that consists of discrete and well-defined clinical and imaging parameters, and investigated inter-rater agreement in patients with suspected TIA.

Methods—Fellowship-trained vascular neurologists, blinded to final diagnosis, independently reviewed identical history, physical examination, routine diagnostic studies and brain MRI (diffusion and perfusion images) from consecutive patients with suspected TIA. Each patient was rated using the 8-point PREDISC score, composed of a clinical score (0-4 points) and an imaging score (0-4 points). The composite PREDISC score determines a PREDISC Likelihood of Brain Ischemia Scale: 0-1 = unlikely, 2 = possible, 3 = probable, 4-8 = very likely. Results—Three raters reviewed data from 114 patients. Using PREDISC, all 3 raters scored a similar percentage of the clinical events as being “probable” or “very likely” caused by brain ischemia: 57%, 55% and 58%. Agreement was high for both total PREDISC Score (Intraclass correlation coefficient [ICC] of 0.94) and for the Likelihood of Brain Ischemia Scale (AC1 agreement coefficient of 0.84). Conclusions—compared to prior studies, inter-rater agreement for the diagnosis of transient brain ischemia appears substantially improved with the PREDISC scoring system. This score is the first to include specific criteria to assess the clinical relevance of DWI and perfusion lesions and supports the added value of MRI for assessing patients with suspected TIA.