Additional information given to a multimodal imaging stroke protocol by transcranial doppler ultrasound in the emergency room: A prospective observational study

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Background: Transcranial Doppler (TCD) ultrasound can demonstrate dynamic information. We aimed to evaluate whether TCD generates useful additional information in the emergency room after a multimodal stroke imaging protocol and also whether this modified the management of patients with cerebral infarction. Methods: Patients admitted between April 2006 and June 2007 with ischemic stroke of less than 24 h were subjected to a protocol consisting of noncontrast brain CT, computed tomography angiography, diffusion-weighted magnetic resonance imaging and then TCD within the following 6 h by an observer blinded to the results of imaging studies. Results: Seventy-nine patients were included. The imaging protocol was performed 457 (±346) min after stroke symptoms and TCD after 572 (±376) min. TCD provided additional information in 28 cases (35.4%, 95% CI 25.7-46.4). More that one piece of additional information was obtained in 6 patients. The most frequent additional information was collateral