Cardiovascular risk after ischemic attack predicted by ultrasound

July 30 2009

Ultrasound can be used to determine a patient's heart risk after a transient ischemic attack (TIA). An evaluation of transcranial (TCD) and extracranial (ECD) Doppler ultrasonography, published in the open access journal *BMC Medical Imaging*, has shown that both future stroke and future cardiovascular ischemic events can be predicted by abnormal findings.

Cardiovascular disease is the major cause of death on long-term follow-up after a TIA. Dr. Holger Poppert from the Technische Universität München, Germany, worked with a team of researchers to evaluate the ability of ultrasound to predict the likelihood of new vascular events in 176 TIA patients, with a median follow-up of 27 months. He said, "Nearly 40% of the patients with either stenoocclusive disease in ECD or pathological findings in TCD suffered a new ischemic stroke or TIA. Furthermore, detection of reactive collateral flow patterns or intracranial stenosis by TCD predicts new cardiovascular ischemic events on medium to long-term follow-up".

The researchers found that 5 of 18 patients with abnormal TCD findings (27.8%), but only 4 of 134 patients without (3%), developed a subsequent cardiovascular ischemic event. Speaking about these results, Poppert said, "Our findings support the routine use of TCD in addition to ECD in TIA patients. Moreover, routine screening tests for coronary artery disease and aggressive prevention therapies should be considered in TIA patients with pathological TCD findings".

Transcranial Doppler ultrasonography predicts cardiovascular events after TIA, Katrin Holzer, Suwad Sadikovic, Lorena Esposito, Angelina Bockelbrink, Dirk Sander, Bernhard Hemmer and Holger Poppert, *BMC* Medical Imaging (in press), www.biomedcentral.com/bmcmedimaging/

Source: BioMed Central (news : web)