Role of Duplex in assessment of extracranial carotid artery in patient with transient ischeamic Attacks (tias)

Mohammed Mohammed Aiad

Transient ischaemic attacks (TIAs) is a neurological disease that caused by interruption of the cerebral blood flow.Our study shows that all patients with TIAs having atherosclerotic plaques in their extracranial carotid arteries, and most of these plaques cause non significant stenosis.The results shows that the risk factors of carotid arteriosclerosis are age (above 60 years), sex (male), hypertension, smoking, diabetes mellitus and coronary heart disease, so its advisable to screen all patients above 60 years especially who have one or more of the above risk factors using duplex ultrasound for the presence of carotid plaques.Our study proved that: the severity of stenosis is related to plaque morphology and intimal thickness; the more heterogeneous, hypoechoic, irregular plaques and with thickened intima, the more stenosis is found.The results proved that the cardinal Doppler parameters (especially the peak systolic velocity and the peak systolic velocity ratio) showing direct relation to the degree of stenosis, especially with sever stenosis, so using carotid Doppler parameters can differentiate between significant and non significant carotid stenosis.The results proved that more than 80% of the causes of TIAs does not mean significant stenosis. For this reason it is not suitable to screen patients with TIAs using invasive angiography. Utilizing carotid Duplex as non invasive modality can save more than 80% of the patients from doing angiography.Finally, as we found all patient with TIAs having carotid plaques with the majority cause non significant stenosis and as the severity of the stenosis is related to the sonographic morphology of the plaques and intimal thickness that can be evaluated easily and accurately by ultrasound, and the ability of Doppler measurements to differentiate between significant and non significant carotid stenosis, so its recommended that all patients with TIAs must be examined by duplex ultrasonography.