The importance of duplex scan in the detection of innominate arteries significant stenosis

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Atherosclerotic occlusive disease of the innominate arteries is not common, comprising less than 2% of all extracranial causes of cerebrovascular insufficiency. The most prevalent clinical signs are upper extremity arterial insufficiency and subclavian steal syndrome. The carotid steal and TIA-s is less common. Patients and methods: We present three cases with innominate arteries (IA) subocclusion, two female, median old 62y, with hyperlipidemia, two of them have had hypertension. In this case series, all patients had carotid artery's symptoms with transitory visual disturbances, two of them had left side hemiparesis and only one male patient had right hemispheric stroke. At all patients performed a carotid duplex scan, which demonstrated 80% stenosis of the innominate arteries and hemodynamically insignificant stenosis of the right internal carotid artery. Furthermore, blood stasis with 'diastolic flow'' suggestive of brachiocephalic artery stenosis was demonstrated in the right common carotid, right internal and external carotid and right vertebral arteries. At ''diastolic flow'' there wasn't difference between systolic and diastolic picks at Doppler waves. All patients undergo digital subtraction angiography and PTAs. The flow improvement rate was followed by Duplex scan. Immediately after PTA, a significant increase in systolic peak was recorded in all branches of IA. Conclusion: Duplex scan is a very important method in detecting significant stenosis of IA as well as monitoring the flow recovery after PTA. ''Diastolic flow'' should induce suspicion of the presence of significant innominate arteries stenosis.