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Subclavian Steal Syndrome

National Cancer Institute

Source

National Cancer Institute. *Subclavian Steal Syndrome*. NCI Thesaurus. Code C35044.

An uncommon neurovascular condition seen with exertion of the upper extremity. It is usually caused by atherosclerotic stenosis or occlusion of the subclavian artery proximal to the origin of the vertebral artery. In order to maintain adequate perfusion of the arm during exercise on the affected side, the narrowed subclavian artery siphons off retrograde blood flow from the ipsilateral vertebral artery. This is possible due to lower blood pressure distal to the site of narrowing and collateral circulation through the circle of Willis. Affected individuals may remain asymptomatic until the oxygen demand generated from upper extremity exercise requires a large enough compensatory volume of blood to be diverted from the vertebral artery to provoke vertebrobasilar insufficiency and its accompanying neurological sequelae. Presenting clinical signs may include pain or numbness of the affected arm (with diminished pulses and a brachial systolic blood pressure differential of greater than 20 mmHg as compared to the opposite arm), vertigo, tinnitus, dysarthria, diplopia and syncope. Notably, unlike cerebral infarction, the clinical course does not lead to chronic neurologic disability. Prognosis for recovery of normal anterograde circulation is favorable following endovascular or surgical intervention.