

When to operate in carotid artery disease?

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Título: When to operate in carotid artery disease? Carotid endarterectomy (CEA) vs carotid angioplasty/stenting (CAS)

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Resumen

Stroke is often caused by atherosclerotic lesions of the carotid artery bifurcation. Approximately 15% of ischemic strokes are caused by extracranial internal carotid artery (ICA) stenosis. Carotid atherosclerosis develops in areas of flow vessel-wall shear stress, most commonly the carotid artery bulb. In addition to the degree of carotid artery stenosis, plaque structure has been postulated as a critical factor in defining stroke risk.

Results

form landmark prospective studies comparing best medical therapy with carotid endarterectomy (CEA) provide compelling evidence of the benefit of CEA performed by experienced surgeons in improving the chance of stroke-free survival in high-risk symptomatic patients. Timely surgical intervention in selected patients with hemispheric transient ischemic attacks (TIAs), amaurosis fugax, or completed non-disabling carotid artery territory ischemic strokes within the previous six months, and with 70% - 99% diameter reducing carotid artery stenosis, can significantly reduce the risk for recurrent cerebral ischemia or death. With low surgical risk, CEA also provides modest benefit in symptomatic patients with ICA stenosis of 50% - 69%, especially among men with hemispheric ischemia who are not-diabetic. There is no evidence that CEA provides any benefit over medical therapy if the stenosis is less than 50%.

Controversy

still surrounds the selection of asymptomatic patients (60% - 99% stenosis) for CEA. Based on combined data from the Asymptomatic

Carotid Atherosclerosis Study (ACAS) and the Asymptomatic Carotid Surgery Trial Collaborators (ACST), the 5-year risk of stroke in these asymptomatic patients randomized to best medical therapy was around 12%, falling to approximately 6% with CEA. This corresponds to an absolute risk reduction (ARR) of 1% per year, or 5.4% - 5.9% at 5 years.

Carotid

angioplasty and stenting (CAS) has recently emerged as a less invasive and popular alternative to carotid endarterectomy (CEA) for the treatment of patients with symptomatic or asymptomatic carotid artery disease (CAD). Preliminary data suggest that these two interventions may have comparable efficacy. However, CAS is currently reserved for "high-surgical risk" patients. However, whether CAS proves to be safer or shares "equipoise" with CEA remains a highly controversial subject.