

Non Patch Endarterectomy

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Abstract

Background

Carotid endarterectomy (CEA) reduces the risk of stroke in patients with symptomatic (>50%) and asymptomatic (>60%) carotid artery stenosis. Here we report the midterm results of a microsurgical non-patch technique and compare these findings to those in the literature.

Methods

From 1998 to 2009 we treated 586 consecutive patients with CEA. CEA was performed, under general anesthesia, with a surgical microscope using a non-patch technique. Somatosensory evoked potential and transcranial Doppler were continuously monitored. Cross-clamping was performed under EEG burst suppression and adaptive blood pressure increase. Follow-up was performed by an independent neurologist. Mortality at 30 days and morbidity such as major and minor stroke, peripheral nerve palsy, hematoma and cardiac complications were recorded. The restenosis rate was assessed using duplex sonography 1 year after surgery.

Results

A total of 439 (75%) patients had symptomatic and 147 (25%) asymptomatic stenosis; 49.7% of the stenoses were on the right-side. Major perioperative strokes occurred in five (0.9%) patients [n = 4 (0.9%) symptomatic; n = 1 (0.7%) asymptomatic patients]. Minor stroke was recorded in six (1%) patients [n = 4 (0.9%) symptomatic; n = 2 (1.3%) asymptomatic patients]. Two patients with symptomatic stenoses died within 1 month after surgery. Nine patients (1.5%) had reversible peripheral nerve palsies, and nine patients (1.5%) suffered a perioperative myocardial infarction. High-grade (>70%) restenosis at 1 year was observed in 19 (3.2%) patients [n = 12 (2.7%) symptomatic; n = 7 (4.7%) asymptomatic patients].

Conclusions

The midterm rate of restenosis was low when using a microscope-assisted non-patch endarterectomy technique. The 30-day morbidity and mortality rate was comparable or lower than those in recently published surgical series.