



Cerebral Bypass for Progressive Stroke

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Introduction

Thrombolysis is now the standard treatment for acute ischemic stroke, but if the procedural risk of intra-arterial thrombolysis (IAT) or the possibility of hemorrhage after reperfusion is high, IAT may be contraindicated even when patients comply with IAT criteria. Recently, using advanced MRI or CT techniques, late antegrade endovascular recanalization has been reported,1,2 but aggressive mechanical thrombolysis may increase the procedural risk, and high-flow antegrade reperfusion may be harmful to patients showing early ischemic change (EIC). Nevertheless, even these patients can benefit from reperfusion.We represent our experience in evaluating the role of external carotid to internal carotid bypass surgery in preventing stroke both in acute as well as chronic setting whre intravenous or intraarterial thrombolysis is contraindicated

Methods

Patients presented with progressive stroke not amenable for thrombolysis has been included in the study as prospective fashion for 5 yrs.Majority of them underwent the Superficial temporal artery bypass while few of them underwent external carotid to internal carotid bypass using saphenous vein graft

Results

further stroke prevented in 10 patients ,where as the neurological deficit improved in 4 patients.In 1 patient there is occlusion of the bypass.

Conclusions

cerebral bypass is an useful alternative.We evaluated the effect and safety of STA-MCA bypass in patients with an acute ischemic stroke or a stroke in progress requiring urgent reperfusion but ineligible for IAT. In addition, we pooled and analyzed our results with those of other studies on STA-MCA bypass in similarly categorized patients.

Learning Objectives

Superficial temporal artery to middle cerebral artery (STA-MCA) bypass is a relatively straightforward surgical procedure with low complication rates.3-8 Although, in theory, STA-MCA bypass generally provides ischemic tissue with low-flow reperfusion, we considered that even a small amount of blood flow can improve neurological deficits in these patients if rapid revascularization is possible. In addition, low blood flow through an STA-MCA bypass would be advantageous in patients showing EIC, rather than high-flow antegrade reperfusion by IAT.

References