

## **WHAT IS THE BEST THERAPY FOR SYMPTOMATIC INTRACRANIAL ARTERY STENOSIS? MEDICAL THERAPY**

**Ming Liu**

*Stroke Clinical Research Unit, Department of Neurology, West China Hospital, Sichuan University, China*

There has been increased enthusiasm for the use of intracranial angioplasty with or without stenting as an alternative for treating symptomatic intracranial artery stenosis although the WASID trial provided evidence that aspirin and aggressive management of vascular risk factors (particularly systolic blood pressure and LDL) may lower the risk of stroke. My opinion is that at present medical therapy is still the best therapy for symptomatic intracranial artery stenosis although I support to perform more clinical researches on stenting in future. Recently, Jiang and colleagues, based on 100 consecutive patients from a single center with a 99% procedure success rate, reported a 5% of 30-day perioperative stroke and death rate. The cumulative probability of primary end point was 7.3% (95% CI, 2.0% to 12.5%) at 1 year. The in-stent restenosis rate was 26.7%. Fiorella et al also reported the largest (N=158) series of Wingspan for  $\geq 50\%$  symptomatic stenoses in the United States. The immediate perioperative stroke and death rates were 5.7% and 2.5%, respectively. The cumulative rate of any perioperative stroke or death and any ipsilateral stroke was 15.7%. A recent systematic review, including 31 studies dealing with 1177 procedures, reported high technical success rates (median: 96%; interquartile range: 90% to 100%) and the periprocedural minor or major stroke and death rates ranged from 0% to 50% with a median of 7.7%. The cumulative rate of stroke or death was approximately 11% also with a significant rate of restenoses. All these studies show that stent appears to be feasible and promising. However, the device is associated with a high risk of restenosis and the data come from predominantly single-arm trials without parallel control group. Therefore, the current evidence for intracranial stenting is very weak compared with that of many medical therapies. The SAMMPRIS trial, which is the first randomized controlled trials to evaluate stenting for symptomatic intracranial artery stenosis, was terminated owing to safety concerns, and it concluded that aggressive medical management was superior to PTAS. In conclusion, current available evidence supports that aggressive medical therapy is the best therapy for symptomatic intracranial artery stenosis. The application of intracranial stenting should be in the setting of clinical investigation. More randomized controlled trials are needed to assess its real benefit-to-risk ratio.