Letters to the Editor

US Multicenter Experience With the Wingspan Stent System for the Treatment of Intracranial Atheromatous Disease: Periprocedural Results

To the Editor:

We read with great interest the recent article published by Fiorella et al who report a multicenter experience with the use of the Wingspan stent system (Boston Scientific) for the treatment of intracranial atherosclerosis.1 This collaborative effort should be applauded, but we would advocate for closer scrutiny to future registry designs in order to enhance our understanding of treatment modalities being used.

A total of 78 patients with 82 lesions were treated with a high technical success rate and a periprocedural complication rate (stroke or death) of 6.1%.2 We would like to bring attention to 3 issues that may help with further study in this area. The first is the patient selection for the registry. Nineteen of the 78 (24%) patients were not on antiplatelet therapy at the time of their stroke or transient ischemic attack. The natural history of patients who were not on antiplatelet therapy is not clear to date; thus, selection of such patients for angioplasty and stenting may be a bit aggressive considering the 5.1% mortality rate in the periprocedural period in this study. Additionally, the authors correctly point to the Warfarin-Aspirin Symptomatic Intracranial Disease (WASID) study that revealed a 23% risk of recurrent ipsilateral stroke at 1 year when the stenosis was >70%.3 In the current registry, 28 of 82 (34%) lesions were between 50% to 69% which has a lower rate of recurrent stroke risk in WASID (8% within 1 year). The focus of future studies looking at the use of stenting and angioplasty should target the patients with >70% stenosis who have failed antiplatelet therapy or anticoagulation. As technology and operator skill improves, safety studies targeting the moderate stenosis group may be in order.

The second issue of not using independent clinicians to assess these patients pre- and postprocedure is important. We agree that it is unlikely that mortality or large stroke deficits were missed in clinical assessments, but smaller strokes may have clinical implications toward safety of such procedures. As the authors point out, 13 of 38 patients (34%) had new ischemic lesions on MRI. We recognize that new MRI ischemic lesions are detected after extracranial carotid angioplasty and stenting and are clinically silent even with independent observers.3 Nonetheless, it is possible that some of these may have been clinically relevant when examined by a physician who did not perform the procedure. Additionally, it was not clear from the article whether the angiograms were reviewed independent of the operators performing the procedures; thus, the number of lesions in the >70% group may be overestimated. Independent assessment will be important in longitudinal follow-up looking for rates of restenosis.

The last comment is that in the conclusions, the authors note that the procedure carries "an acceptable periprocedural morbidity." This series reports a 5.1% mortality rate: some may disagree on the acceptability of this result, given that 35.9% of patients presented with transient ischemic attack, 2.6% were asymptomatic, 24% of patients were not on antiplatelet therapy at the time of their stroke or transient ischemic attack, and 34% of patients had a 50% to 69% stenosis.

We agree with the authors that larger studies are required with longitudinal follow-up in order to better assess midterm and long-term safety data. Such collaborative registries will help to advance our understanding of these issues more rapidly. Careful consideration of patient selection for such registries will help to further enhance the design of randomized controlled studies that will help to answer the question of efficacy.

Disclosures

None.

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