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Is the Wingspan Stent More Dangerous Than Natural History in Intracranial Stenosis?

In the August issue of the *American Journal of Neuroradiology*, Al-Ali et al¹ compared the results of percutaneous angioplasty (PTA), balloon-mounted stent (BMS), and the Wingspan system (Boston Scientific, Natick, Massachusetts) in the treatment of intracranial stenoses.¹ Both short- and long-term results strongly favored PTA over BMS and Wingspan. The latter, in particular, compared unfavorably with the natural history of the disease in the first year after intervention. The choice of the intervention was not randomized.

In this setting, selection bias affects the results. I noticed that the Wingspan had a 28.8% risk of dissections, against 19.1% for PTA; this is unexpected because angioplasty, the most dangerous part of the procedure with respect to dissection, was performed as a first step in both procedures. In the "Discussion," while explaining their actual policy of treatment, the authors said that the Wingspan is used only when dissection occurs. Does that mean that PTA was switched to the

Wingspan if dissection occurred? If so, because dissection represents a relevant risk for stroke, the results may be deeply biased. The "intention-to-treat" analysis that was used to assess the success rate remains unbiased by treatment switches because single results are attributed to the treatment that was "intended to" and not "effectively" used. This type of analysis would be indispensable to strengthen the results of this very interesting article.

Reference

1. Al-Ali F, Cree T, Hall S, et al. **Predictors of unfavorable outcome in intracranial angioplasty and stenting in a single-center comparison: results from the Borgess Medical Center-Intracranial Revascularization Registry.** *AJNR Am J Neuroradiol* 2011;32:1221–26. Epub 2011 May 5

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