Review of: "Surgical treatment of Temporal Lobe Epilepsy: comparative results of selective amygdalohippocampectomy versus anterior temporal lobectomy from a referral center in Brazil"

John Rolston

Potential competing interests: The author(s) declared that no potential competing interests exist.

The authors present a large case series of 70 patients undergoing right-sided temporal lobectomy and 62 undergoing left-sided selective amygdalohippocampectomy. This is a large series that will further corroborate the utility of epilepsy surgery, which is increasingly important given how underutilized epilepsy surgery is. It's wonderful to report on these outcomes, complications, and thought processes behind surgical decision-making. I'm very happy to have read this paper. There are a few major issues with the results, however, that should be addressed before a final publication, and these are listed below.

The main goal of the paper is to compare anterior temporal lobectomies (ATLs) to selective amygdalohippocampectomies (SAH). Unfortunately, this paper does not compare ATLs to SAHs. Rather it compares RIGHT-sided ATLs to LEFT-sided SAHs. This is a significant confounder. To truly compare ATL and SAH, one would have to control for other variables, specifically laterality. You could easily reframe this as left-sided vs. right-sided surgery and outcome differences.

More globally, there is no documentation of baseline characteristics of the patients, and whether they are balanced. Were the ages the same across groups? Were the number of ASMs tried the same? Age of onset? Seizure semiology? These baseline variables should be examined, to see if they are driving the differences in outcomes between left-sided and right-sided surgeries.

The rationale for doing SAH on the left, per the authors, is to avoid language issues. But there was no language testing for the patients to determine laterality. Could the authors at least discuss the handedness of each patient, since that's highly correlated with language laterality?

Most surgical studies leave ILAE 1 outcomes as a single group. The authors should also put ILAE 1 in their results Table, in addition to grouping ILAE 1-3.

For the complications in Table 3, these should be linked to the surgical approach--e.g., were the memory impairment complications from left-sided or right-sided surgeries?

"Surgery has emerged as a promising treatment for managing crises..." What "crises" are the authors referring to here? Can they clarify?

I don't think it's accurate to say "A tendency to drug refractoriness characterizes it..." since TLE is controlled by medications in 2/3rds of patients. Maybe just say that TLE is drug-resistant in 1/3rd of patients.