

**Stroke prevention in atherosclerotic disease: A comparative study of transfemoral carotid artery stenting (TFCAS) versus transcarotid artery revascularization (TCAR)**

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Carotid endarterectomy (CEA) and carotid artery stenting (CAS) are standard procedures for managing carotid atherosclerotic diseases that lead to plaque embolism and eventual ischemic stroke. Transfemoral carotid artery stenting (TFCAS) and Transcarotid artery revascularization (TCAR) makeup the two common CAS procedures. Our study population was comprised of patients 18+ years of age who underwent a procedure for a carotid stent performed at Prisma Health-Upstate Vascular Surgery at Memorial Hospital. The number of consecutive patients were 244 dating from 2010 to present. This number was adjusted to 142 patients based on the inclusion criteria of patients who received an emergency and/or elective CAS internal carotid artery stent placement. We postulated that there are complications that are “procedure” specific that were not captured in the carotid database registry but the exact quantity of these is yet to be determined. Of the 146 CAS procedures reviewed, our preliminary results show that older patients (>77yrs) were more likely to undergo TCAR over TFCAS, and TFCAS had a higher stroke (7 vs 5) and lower overall associated death outcome (10 vs 13). Additionally, TFCAS showed lower incidences of restenosis (7 vs 10), access site complications (3 vs 8), and geographic stent placement inaccuracies (1 vs 6); however, TFCAS patients appeared to require more post-stent follow-up imaging (CT, MRI) compared to the TCAR population. Reasons behind these additional testing are yet to be identified. Nevertheless, completed results from this study will help inform the carotid stent committee of longer-term patient outcomes from these procedures.