



DOI: <https://doi.org/10.56936/10.56936/18290825-4.v18.2024-31>

**OUTCOME COMPARISON OF CAROTID ENDARTERECTOMY
AND CAROTID ARTERY STENTING IN PATIENTS WITH
EXTRACRANIAL CAROTID ARTERY STENOSIS:
ONE-HOSPITAL-BASED RETROSPECTIVE STUDY**

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Received 17.10.2023; Accepted for printing 10.11.2024

ABSTRACT

Introduction: Extracranial carotid artery stenosis is a significant risk factor for ischemic stroke, necessitating effective management strategies to mitigate potential complications.

This retrospective study aims to compare the short-term (30-day) and long-term outcomes (1-year and 5-year) of carotid endarterectomy and carotid artery stenting in patients treated for extracranial carotid artery stenosis at National Scientific Center of Surgery named after A.N. Syzganov.

Material and methods: A retrospective review of medical records from spanning from January 2018 to December 2023 was conducted. Patients diagnosed with extracranial carotid artery stenosis who underwent either carotid endarterectomy or carotid artery stenting were included in the study. Data collection focused on demographic characteristics, comorbidities, procedural details, and outcomes including perioperative complications, 30-day mortality, and long-term follow-up data such as restenosis rates and stroke recurrence.

Results: A total of 237 patients met the inclusion criteria, with 32% undergoing carotid endarterectomy and 68% receiving carotid artery stenting. During the study, four periprocedural strokes occurred: three in the carotid artery stenting group and one in the carotid endarterectomy group ($p < 0.005$). Additionally, the carotid artery stenting group experienced one case of transient ischemic attack, while the carotid endarterectomy group had one case of thrombosis. There was one death in the carotid artery stenting group during the perioperative period. Over a follow-up period of less than one year and less than five years, 42 deaths were recorded, with mortality rates of 13.1% for carotid endarterectomy and 19.8% for carotid artery stenting ($p < 0.005$). The carotid artery stenting group also had one periprocedural myocardial infarction, and both groups had one case of periprocedural hemorrhage each. Cardiac arrhythmias were identified as the primary cause of death among these cases.

Conclusion: In conclusion, this retrospective study provides important insights into the short-term and long-term outcomes of carotid endarterectomy versus carotid artery stenting for extracranial carotid artery stenosis. Both procedures demonstrate efficacy in preventing stroke, yet differences in outcomes warrant careful consideration in clinical decision-making.

Keywords: carotid endarterectomy, carotid artery stenting, extracranial carotid artery stenosis, stroke.

CITE THIS ARTICLE AS:

Saduakas A.Y., Kurakbayev K.K., Zhakubayev M.A. et al. (2024). Outcome comparison of carotid endarterectomy and carotid artery stenting in patients with extracranial carotid artery stenosis: one-hospital-based retrospective study. The New Armenian Medical Journal, vol.18(4), 31-36; <https://doi.org/10.56936/10.56936/18290825-4.v18.2024-31>

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