

Introduction

In 2011, five international committees independently published new guidelines endorsing carotid artery stenting (CAS) as a valid alternative to carotid endarterectomy (CEA) for patients with symptomatic carotid stenosis and high perioperative risks. It is unknown if CEA related mortality rates have improved since the publication of these guidelines.

Methods

We utilized the Healthcare Cost and Utilization Project Nationwide Inpatient Sample database (1998 to 2013; 97,822,480 patients) and identified 308,383 adults who underwent CEA. Applying logistic regression analyses (SAS 6.4; SPSS 22) and adjusting for hypertension, diabetes mellitus, age, race, sex, number of comorbidities and care complexity (numbers of inpatient diagnosis/ procedures) we compared annual trends in mortality, length of hospital stay (LOS) and hospital costs >\$20,000 among all CEA patients.

Results

Mean age of CEA patients was 71 years (SD \pm 9 years) with 77% >65 years old; 42% females; 89% Whites, 3.7% Blacks and 3.6% Hispanics. Among them, 75% had HTN, 30% DM, in-patient mortality 0.5%; mean LOS 3 days (SD \pm 4.0) and mean hospital costs \$13,010 (SD \$53,331). After covariate adjustment, comparison between 1998 to 2010 and 2011 to 2013 identified average yearly CEA mortality of 0.5% (162 patients) and 0.4% (62 patients); mean LOS from 3.04 to 2.65 days; and patients with costs >\$20,000 from 70% to 30% (all $P < 0.001$).

Conclusions

These population-based results suggest improvements in mortality rates, lengths of stay, and cost since CAS was recommended as an alternative to CEA. These results may be due to better treatment allocation of high-risk patients to CAS.

[Default Poster]

Learning Objectives

Usefulness of selecting the preferred treatment modality in high risk patients with symptomatic extracranial carotid stenosis.

References

1. Brott TG et al 2011 ASA/ACCF/AHA/AANN/AANS/ACR/ASNR/CNS/SAIP/SCAI/SIR/SNIS/SVM/SVS guideline on the management of patients with extracranial carotid and vertebral artery disease, *Vasc Med*. 2011 Feb;16(1):35-77.
2. Brott TG et al. Stenting versus endarterectomy for treatment of carotid-artery stenosis. *N Engl J Med*. 2010 Jul 1;363(1):11-23
3. Paraskevas KI et al. Comparison of the five 2011 guidelines for the treatment of carotid stenosis. *J Vasc Surg*. 2012 May;55(5):1504-8