**Objectives:** This study evaluates the feasibility, safety, and effectiveness of endovascular interventions for common femoral artery (CFA) occlusive disease.

**Methods:** Using a prospectively maintained multicenter database, we analyzed outcomes in 167 consecutive patients who underwent percutaneous CFA interventions for Rutherford (R) 3 to R6 classification. The standardized treatment approach included primary PTA-only for noncalcified lesions with <50% residual stenosis, atherectomy with or without PTA for calcified lesions or PTA-only failures, and provisional stenting.

**Results:** Over a 7-year period, 167 patients with R3 (n = 91 [54.5%]), R4 (n = 37 [22.2%]) or R5-6 (n = 39 [23.4%]) underwent isolated CFA interventions that included PTA-only (n = 114 [68.2%]), atherectomy with or without PTA (n = 38 [22.8%]), or stent (n = 15 [9.0%]) for failed atherectomy with or without PTA. Procedure-related complications included pseudoaneurysm (n = 1 [0.6%]), thrombosis (n = 1 [0.6%]), distal embolization (n = 1 [0.6%]), and death (R6, n = 1 [0.6%]). At a mean follow-up of 17 months, CFA restenosis was observed in 29 patients (17.4%); these underwent further percutaneous (n = 13 [7.8%]) or surgical (n = 16 [9.6%]) revascularization that included femoral endarterectomy (n = 4 [2.4%]) or femoral-popliteal/tibial bypass (n = 12 [7.2%]). Major or minor amputations were observed in none of the R3 patients, and in only three (3.9%) and five (6.6%) of the R4 to R6 patients, respectively. When compared with the atherectomy with or without PTA group, patients in the PTA-only group had a significantly higher incidence of female gender (43% vs 24%), diabetes (49% vs 29%), hypertension (49% vs 76%), and restenosis requiring secondary interventions (21.9% vs 5.3%; P < .01).

**Conclusions:** Data from this largest study to date would suggest that percutaneous CFA interventions in select patients appear to be relatively safe and effective. Female gender, diabetes, and hypertension negatively impact risk of restenosis, whereas atherectomy with or without PTA reduces re-stenosis risks significantly. A randomized controlled trial is warranted.


**References:**

**Abstracts**

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**A Randomized Controlled Trial of Domain-Specific Cognitive Function After Carotid Endarterectomy and Stenting**

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**Objectives:** Observational data indicate that carotid artery stenting (CAS) is associated with higher incidence of subclinical cerebral microemboli than carotid endarterectomy (CEA). We hypothesized that CEA would be associated with superior performance on cognitive domain-specific testing compared with CAS.

**Methods:** Patients with >80% asymptomatic carotid artery stenosis were randomized to CEA or CAS. A robust battery of tests was used to assess the cognitive domains of attention, memory, mood, visual-spatial skills, motor ability, processing speed, and executive functioning ≤10 days preoperatively and at 6 weeks and 6 months postoperatively. Patients without contraindications to magnetic resonance imaging underwent assessment of cerebral microinfarcts (CMI), mean transit time (MTT), cerebral blood flow (CBF), and cerebral blood volume (CBV) at the same time points.

**Results:** Baseline cognitive performance was similar between CAS (n = 29) and CEA (n = 31) groups (P > .05). Relative to baseline, verbal and visual memory and attention functions improved in CAS and CEA groups at 6 months (multiple cognitive tests achieved statistical significance). Compared with CEA, cognitive processing speed (Stroop Color test: 9.0 vs 7.3, P = .04; and Stroop Word test: 9.0 vs 7.4, P = .05) and executive functioning (Trail Making Test: 49.4 vs 44, P = .06) were superior in CAS at 6 weeks. Executive functioning (Phonemic verbal fluency: 10.6 vs 8.4, P = .01) and motor function (Grooved Pegboard of nondominant extremity: 45.7 vs 38.9, P = .01) were also superior in CAS at 6 months. Tests of attention, memory, and visual-spatial skills were similar between CAS and CEA at 6 weeks and 6 months. CMI, CBF, and MTT were similar between the groups at all time points.

**Conclusions:** Memory and attention improve within the first 6 postoperative months with both CAS and CEA. Compared with CEA, CAS results in improved cognitive processing speed, executive functioning, and motor function.

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remains problematic. Preoperative variables correlate with increased morbidity and mortality, yet no easily implemented tool exists to stratify patients. We determined the relationship between our fully implemented frailty-based bedside Risk Analysis Index (RAI) and complications after carotid endarterectomy (CEA).

Methods: Variables of frailty RAI for patients undergoing CEA in American College of Surgeons National Surgical Quality Improvement Project (NSQIP) database (2005-2011) were matched to preoperative NSQIP variables, and outcomes including mortality, stroke, and length of stay were analyzed. We further analyzed patients who were symptomatic and asymptomatic before CEA.

Results: A total of 44,832 patients undergoing CEA were analyzed, of which 27,136 (60.5%) were asymptomatic and 17,696 (39.5%) were symptomatic. RAI demonstrated increasing risk of stroke and death based on risk stratification: low risk (0-10), 1.9%; high risk (>10), 5.2%. Increasing frailty RAI score correlated with increasing mortality, stroke, and length of stay ($P < .01$; Fig). The majority of patients undergoing CEA scored low on the RAI (87.5% symptomatic/94.4% asymptomatic).

Conclusions: Frailty is an independent predictor of increased mortality, stroke, and length of stay after CEA. An easily implemented RAI holds the potential to identify a limited subset of patients who are at higher risk for postoperative complications and may not benefit from CEA.

Fig. Stroke and death rate for total NSQIP CEA group based on frailty RAI score.


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The Effect of Beta Blockade on Operative Mortality: Harmful or Helpful?
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Objectives: The use of perioperative pharmacologic β-blockade (BB) in patients with low risk of myocardial ischemic events undergoing non-cardiac surgery (NCS) is controversial because of the risk of stroke and hypotension. Published studies have not shown consistent benefit in this cohort. The present investigation was undertaken to determine the perioperative effect of BB on NCS patients.

Methods: This is a retrospective observational analysis of operative patients in Veterans Affairs (VA) hospitals from October 2009 through September 2013. BB was started 8 hours before surgery and continued postoperatively. Data from the VA electronic database included demographics, diagnosis and procedure codes, medications, peroperative laboratory values, and date of death. A 4-point cardiac risk score was calculated by assigning 1 point each for renal failure, coronary disease, diabetes, and surgery in a major body cavity. End points were death in-hospital and ≤ 30 days. Previously validated linear regression models for all hospitalized acute