Shamblin I, 36 Shamblin II, and 34 Shamblin III CBT. Sixty-five percent of patients had positive family history and 66% of tumors were part of bilateral CBT. Mean operative blood loss was 227 ± 260 mL and postoperative temporary nerve palsy was 20%, which was related to increasing Shamblin classification (P = .03). Only four patients (4.4%, n = 3 Shamblin III, P = NS) suffered from permanent cranial nerve palsy, and one (1.1%) patient experienced a stroke postoperatively. These peri- and postoperative results compare favorable to the complication rates reported in contemporary literature (commonly >10% persistent cranial nerve palsy).

Conclusions: This large series of surgically treated CBTs strongly supports a craniocaudal dissection as surgical technique of choice as it limits blood loss and facilitates safe CBT dissection with a low complication rate.

Author Disclosures: J. F. Hamming: Nothing to disclose; E. Nyns: Nothing to disclose; M. Paridaens: Nothing to disclose; J. M. van Baalen: Nothing to disclose; H. van Bockel: Nothing to disclose; K. E. van der Bogt: Nothing to disclose.

PS46.

Carotid Endarterectomy Under Local Anesthesia Has Less Risk of Myocardial Infarction Compared to General Anesthesia: An Analysis of National Surgical Quality Improvement Program Database

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Objectives: As carotid endarterectomy (CEA) is being increasingly compared to carotid artery stenting and the best current medical management, it has become important to revisit variables that might affect the outcomes of the procedure. Multiple studies have evaluated the effect of anesthesia type on CEA with inconsistent results. Our study compared 30 day postoperative myocardial infarction (MI), stroke and mortality between CEA under local or regional anesthesia (LA) and CEA under general anesthesia (GA) utilizing National Surgical Quality Improvement Program (NSQIP) database.

Methods: All patients listed in NSQIP database that underwent CEA under GA and LA from 2005-2011 were included with the exception of patients undergoing simultaneous CEA and CABG. Postoperative MI, stroke, and death at 30 days were compared between the two groups using simple and multiple logistic regression.

Results: A total of 42,265 CEA cases were included. 37,502 (88.7%) were performed under GA and 4763 (11.3%) under LA. CEA under LA had a significantly decreased risk of 30 day postoperative MI when compared to CEA under GA (0.4% vs 0.86%; P = .012). No statistically significant differences were found in postoperative stroke or mortality (Table).

Conclusions: CEA under LA carries a decreased risk of postoperative MI when compared to CEA under GA.

Patients with multiple comorbidities at risk of postoperative MI should be considered for CEA under LA.

Table. Comparison of 30-day postoperative MI, stroke, and death for CEA under LA vs GA with and without adjustment for confounding factors

<table>
<thead>
<tr>
<th></th>
<th>CEA under LA (n = 4763)</th>
<th>CEA under GA (n = 37,502)</th>
<th>Unadjusted P value</th>
<th>Adjusted P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>MI, No. (%)</td>
<td>20 (0.40)</td>
<td>323 (0.86)</td>
<td>0.002</td>
<td>0.012</td>
</tr>
<tr>
<td>Stroke, No. (%)</td>
<td>66 (1.39)</td>
<td>592 (1.58)</td>
<td>0.318</td>
<td>0.540</td>
</tr>
<tr>
<td>Death, No. (%)</td>
<td>32 (0.67)</td>
<td>315 (0.84)</td>
<td>0.227</td>
<td>0.664</td>
</tr>
</tbody>
</table>

Author Disclosures: M. Crosby: Nothing to disclose; J. Dort: Nothing to disclose; E. Kfoury: Nothing to disclose; D. Mukherjee: Nothing to disclose; A. Trickey: Nothing to disclose.

PS48.

Do Women Experience Delays in Carotid Endarterectomy?

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Objectives: The objectives are to evaluate among hospitalized men and women with carotid disease if women experience a delay in undergoing carotid endarterectomy (CEA) and examine gender based differences in CEA outcomes.

Methods: Cross-sectional study utilizing the Nationwide Inpatient Sample Database, 2000-2009. ICD-9 codes were used to identify patients who underwent CEA. Outcomes measured were time from admission to surgery, mortality, complications, mean length of stay (LOS), and discharge disposition. Bivariate and multivariate regression analysis was performed.

Results: Among 221,291 patients who underwent CEA, on bivariate analysis both symptomatic and asymptomatic women had a longer time from admission to surgery than men (symptomatic, 2.8 vs 2.6 days; asymptomatic, 0.53 vs 0.48 days; all P < .001). However, on multivariable analysis adjusting for other patient and clinical factors, there was no difference between men and women in time from admission to CEA. Asymptomatic women were less likely than men to have a cardiac complication (OR, 0.90) or mortality (OR, 0.83). Symptomatic women were also less likely than men to have a cardiac complication (OR, 0.78). However, women were more likely to be discharged to a facility or requiring home health (symptomatic OR, 1.26; asymptomatic OR, 1.18).

Conclusions: This is the first national population based study examining whether women experience a longer time from admission to surgery. After adjusting for other patient and clinical factors, gender did not affect timing of surgery. Interestingly, women were less likely than men to have a cardiac complication or die, but more likely to require home health or nursing home care after discharge.
Table. Associations between gender and carotid endarterectomy outcomes

<table>
<thead>
<tr>
<th></th>
<th>Death (OR (95% CI))</th>
<th>Time to surgery (OR (95% CI))</th>
<th>Perioperative stroke (OR (95% CI))</th>
<th>Myocardial infarction (OR (95% CI))</th>
<th>Surgical cardiac complications (OR (95% CI))</th>
<th>Length of stay, days (OR (95% CI))</th>
<th>Discharge to facility or home health (OR (95% CI))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asymptomatic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Female</td>
<td>0.83 (0.70-0.98)</td>
<td>NS</td>
<td>NS</td>
<td>0.90 (0.83-0.97)</td>
<td>0.93 (0.92-0.93)</td>
<td>1.26 (1.20-1.33)</td>
<td></td>
</tr>
<tr>
<td>Symptomatic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Male</td>
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<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Female</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>0.78 (0.63-0.97)</td>
<td>0.92 (0.90-0.95)</td>
<td>1.18 (1.10-1.28)</td>
<td></td>
</tr>
</tbody>
</table>

*Adjusted for age, emergency surgery, insurance status, race, hospital location, hospital region, hospital teaching status.

CI, Confidence interval; NS, not significant; OR, odds ratio.

Author Disclosures: K. Brown: Nothing to disclose; A. Dua: Nothing to disclose; S. Kuy: Nothing to disclose; C. Lee: Nothing to disclose; B. Lewis: Nothing to disclose; B. Patel: Nothing to disclose; P. Rossi: Nothing to disclose; G. Scabrook: Nothing to disclose.

PS50.
Determining Liability in Carotid Endarterectomy Malpractice Litigation

Objectives: Malpractice litigation and associated costs are a factor in increasing healthcare expenditures over recent decades. Serious potential complications accompanying carotid endarterectomy (CEA), along with the presence of accepted and widely-used alternatives, make this procedure a target for litigation. The objective of this analysis was to characterize the medicolegal environment surrounding CEA, including factors determining legal responsibility.

Methods: The WestLaw database was searched for medical malpractice related to CEA. Case outcomes, alleged cause(s) of malpractice, awarded damages, and other factors in litigation were recorded.

Results: Of 37 jury verdicts and settlements in this analysis, defendants were found not liable in 25 (67.5%) cases. The most frequently reported complications were cerebrovascular accident (CVA) (51.3%) and hypoglossal nerve injury (27.0%), with other complications including airway compromise, vocal cord injury, and death. None of the cases reported myocardial infarction. Cerebral monitoring was mentioned in only two cases, while alleged inadequate informed consent, delay in diagnosis, and requirement of additional surgery were present in a considerable proportion. Settlements and jury awards averaged $895,833 and $1.5M respectively.

Conclusions: CVA and hypoglossal nerve injury are the most frequently litigated complications of CEA. While the majority of decisions found physicians not liable, damages that were awarded were considerable, exceeding $1.5M, suggesting that characterization of factors in determining legal responsibility can help surgeons minimize liability as well as improve patient safety. The importance of explicitly listing these complications in informed consent may restrict liability, as may other steps such as perioperative cerebral monitoring in order to reduce injuries from a delay in CVA diagnosis.

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PS52.
Retrospective Analysis of Neurological Complications Following Cea in Patients Affected by Carotid Stenosis and Contralateral Occlusion
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Objectives: To report on the incidence of neurological complications following CEA in patients affected by carotid stenosis with contralateral occlusion (CO), to analyze factors associated to neurological complications in this group of patients, and to compare results between those patients and the whole group of patients submitted to CEA at our Vascular Division.

Design: retrospective review of a prospectively-collected single-center database.

Methods: From January 1997 to November 2012, one-thousand-six-hundreds-eighty-two patients were consecutively submitted to CEA. 139 presented a CO (each patient had contralateral occlusion coexisting with ipsilateral carotid stenosis). Of these 139 patients, 117 presented with contralateral occlusion on the same side as the carotid stenosis. One hundred forty patients presented to the Vascular Division.

Results: Of the patients with CO, 71 were symptomatic and 68 were asymptomatic. Among all patients submitted to CEA, 74 had CO, 68 were symptomatic and 4 had mild stenosis. Patients with CO were more frequently male, smokers, younger, and symptomatic than those without CO (P < .02). They presented more frequently a preoperative brain infarct and associated peripheral arterial disease (P < .001).

Conclusions: Patients with CO presented higher overall and major neurological complications rates compared to patients...