



Hackensack Meridian Health


For Symptomatic Carotid Stenosis, Is Emergent Treatment On Weekend More Risky? What About CEA vs CAS?

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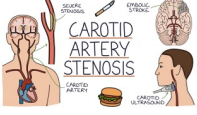

Disclosure

- None




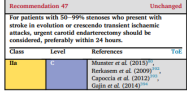

Background

- Extracranial Carotid Artery Stenosis
 - 1-2% of patients between 40 and 70 years
 - 58 million worldwide
 - Symptomatic vs asymptomatic
 - Symptomatic: ≥ 50% stenosis (SVS guideline)
 - Revascularization 48 hours to 14 days of symptom onset (1B)
- Revascularization technique
 - Carotid endarterectomy (CEA)
 - Carotid artery stenting (CAS)
 - Transcarotid artery revascularization (TCAR)
 - Transfemoral carotid artery stenting (TF-CAS)



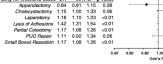

Crescendo Transient Ischemic Attack (TIA)

- Recurrent TIAs
 - Increase in frequency, duration and severity of events over hours or days
- Urgent surgical treatment recommended for stroke in evolution or crescendo TIAs


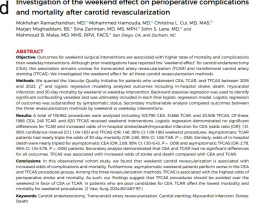

Background

- Weekend effect of surgery
 - Well known across multiple surgical subspecialties
 - Cardiac surgery
 - Emergency general surgery
 - Neurosurgery
 - Pediatric surgery

Background

- Weekend effect on carotid revascularization

Aim

- To investigate the "weekend effect" in patients undergoing emergent carotid revascularization for symptomatic carotid artery stenosis with worsening neurologic deterioration



Methods

- Retrospective review of the Vascular Quality Initiative database
 - >900 hospitals in the United States and Canada
 - From January 2003 to September 2023
 - All symptomatic patients > 18 years undergoing emergent CEA or CAS for worsening neurologic deterioration (TIA or stroke)
 - Emergent operation: done within 6 hours or ASAP because of worsening symptoms
- Outcomes
 - Primary: in-hospital stroke, 30-day death, in-hospital MI
 - Secondary: stroke/death, stroke/death/MI
- Univariate and multivariable logistic regression analyses

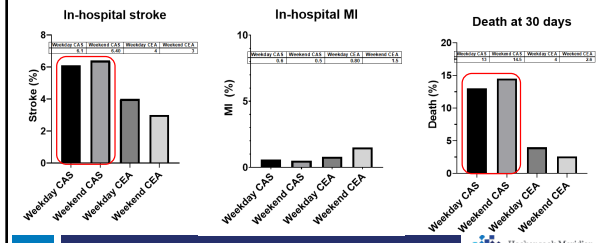


Results

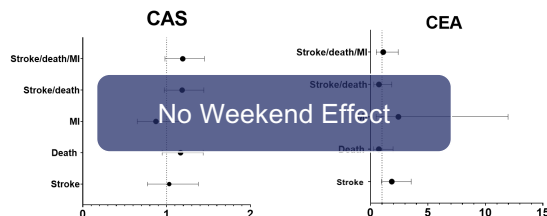
Characteristic	CAS			CEA		
	Weekday Surgery	Weekend Surgery	P-Value	Weekday Surgery	Weekend Surgery	P-Value
No.	3288 (76%)	1941 (24%)		794 (87%)	591 (23%)	
Age, years	66.4 (12.3)	65.6 (12.3)	0.053	71.5 (8.8)	67.6 (12.3)	<.001
> 75 years	24%	22%	0.099	32%	33.52%	0.638
Male	80%	65.4%	0.558	85%	86%	0.347
White	83.6%	83.9%	0.801	86%	79%	0.019
Black	8.9%	8.4%	0.604	6%	6%	0.734
Hypertension	78.9%	74.9%	0.005	80%	84%	0.424
Coronary artery disease	31.9%	31%	0.455	25%	22%	0.085
CHF	10%	10%	0.564	10%	9.40%	0.687
Diabetes	29.2%	30.5%	0.413	36%	28%	0.072
Current smoker	35.4%	37.2%	0.304	31%	26%	0.123
Aspirin	91%	46%	0.003	74%	70%	0.215
CCV antagonist	20%	22%	<.0001	32%	26%	0.032
Anticoagulant	3%	2%	0.123	10.70%	12.60%	0.462
Statins	46%	39%	<.0001	71%	65%	0.067



Results



Results



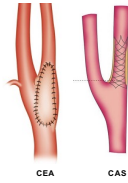
Discussion

- Weekend effect
 - Not for emergent carotid revascularization
 - Significant adverse outcomes with CAS
 - Substantially increase in in-hospital stroke and mortality compared to CEA
- Limitations
 - Retrospective
 - Lack of TCAR volume



Conclusion

- No significant weekend effect among symptomatic patients presenting with acute neurologic deterioration undergoing emergent carotid revascularization (CEA + CAS)
 - Mortality, stroke, MI
- CAS in symptomatic patients
 - Higher overall mortality and stroke associated with CAS in this subset of patients
 - Better treated with CEA



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