Carotid Plaque Morphology Is Only Important In Symptomatic Patients

Henrik Sillesen MD, DMSc
Chairman & professor
Dept. Vascular Surgery, Rigshospitalet
Univ. of Copenhagen, Denmark

Disclosures

STRONG BELIEVER IN PLAQUE MORPHOLOGY

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Topakian et al, Neurology 2011
Nicolaides et al JVS 2010
Risk of asymptomatic CS is minor

Asymptomatic Carotid Artery Stenosis Treated with Medical Therapy Alone: Temporal Trends and Implications for Risk Assessment and the Design of Future Studies

Hadar N et al, Cerebrovasc Dis 2014

Does imaging of atherosclerosis improve risk prediction?

Muntendam et al: Am Heart J 2010;160:49-57

Cardiovascular risk of carotid stenosis

Cumulative MACE by CAS

p-value <.001

Diagnosis of carotid stenosis based on Doppler criteria
Stroke risk in asympt CS is low - even using best plaque morphology technology

- 0.5% annual risk overall
- Features of instability may identify plaques with higher stroke risk, i.e., HR 3 (needs prospective validation)
- 1.5% annual risk of ipsilateral stroke
- Should CEA/CAS be offered?

- With 50% ARR NNT 133 CEA’s to prevent 1 stroke in 1 year

Risk of ipsilateral stroke in symptomatic patients with 70-99% stenosis

ARR: 16% NNT: 6

Gender & Age

Timing of surgery

Effect of “fast” endarterectomy
Morphology in symptomatic CS

- Plaque morphology may help select those at high risk among those symptomatic at low risk:
  - moderate stenosis
  - "distant" symptoms
  - younger patients
  - females

Thank you for your attention