EXTERNAL CAROTID ARTERY PLAQUE INDEPENDENTLY PREDICTS MORTALITY IN PATIENTS WITHOUT INTERNAL CAROTID ARTERY ATHEROSCLEROSIS

ACC Oral Contributions
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Background The presence of plaque in the ECA detected on carotid duplex ultrasound (CDU) is of unknown clinical significance and may not be reported. We hypothesize that ECA plaque in the absence of plaque in other vessels on CDU is a risk factor for increased mortality.

Methods We queried the Non-Invasive Vascular Laboratory database for all CDUs performed 1/3/2005-12/30/2005. All images were reviewed for the presence of plaque. Studies were included if ECA plaque was present in the absence of plaque in the CCA or ICA. Chart review was performed to obtain demographic and clinical information. All cause mortality was determined using the social security death index.

Results 477 patient studies met inclusion criteria. 63 patients (13.21%) had plaque in one or both ECAs. There was no statistically significant difference in age (mean 58.4 years), race (82.4% white), LDL (mean 93.1 mg/dL), sex (64.2% male), diabetes (15.6%), hypertension (56.6%), smoking (42.7%), statin use (45%), or aspirin use (57.1%) between patients with and without ECA plaque. There were 60 deaths over a median follow-up of 5 years. There was a significant difference in mortality between patients with and without isolated ECA plaque (Figure), adjusted HR 3.1 (95% CI 1.57-6.12, p=0.001).

Conclusions The presence of isolated plaque in the ECA as detected on CDU is an independent predictor of death and should be routinely reported. Aggressive cardiovascular risk reduction therapies should be considered for patients with isolated ECA plaque.