



### OPTICAL COHERENCE TOMOGRAPHY OF CULPRIT LESIONS IN PATIENTS WITH PRIOR CEREBROVASCULAR EVENTS COMPARED TO CONTROLS

Poster Contributions  
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**Background:** Whether coronary plaque characteristics of patients with a prior cerebrovascular event (CVE) are different than those without cerebral ischemia remains unknown. Optical Coherence Tomography (OCT) provides detailed imaging of thin-cap fibroatheromas (TCFA), the precursor of coronary plaque rupture. To further characterize this, we assessed the presence of high-risk coronary plaques in patients with and without a prior history of TIA or stroke.

**Methods:** We studied 389 patients with angina undergoing OCT prior to PCI at our institution. Images were analyzed according to validated criteria and included in the OCT database. TCFA lesions were defined by a fibrous cap thickness  $< 65 \mu\text{m}$  and a maximal lipid arc  $> 90^\circ$ .

**Results:** Out of 389 patients, 28 (7%) had a prior CVE (8 TIA, 20 stroke). The time from the ischemic event to PCI was  $8 \pm 4$  years. Both lipid rich plaques and TCFA were more prevalent among patients with prior CVE than controls (Figure). The age and gender-adjusted odds of TCFA was more than two times higher among patients with prior CVE (OR 2.34; 95% CI = 1.01, 5.21). After adjusting for additional cardiovascular risk factors, the odds ratio was 2.02 (95% CI = 0.88, 4.62).

**Conclusions:** In patients presenting with angina, those with a prior CVE displayed a high-risk atherosclerotic phenotype. These findings provide a mechanistic link between cerebral ischemia and high-risk coronary plaques and argue for aggressive risk factor management to prevent both coronary and cerebral ischemic events.

