🏃 VASCULAR DISEASE

MONOCYTE CHEMOATTRACTANT PROTEIN 1 PREDICTS FIRST CORONARY EVENTS BUT NOT RECURRENT STROKES: RESULTS FROM THE SPARCL STUDY

ACC Poster Contributions
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Background: Association of monocyte chemoattractant protein 1 (MCP-1), an inflammatory factor, with stroke has not been studied in a large cohort. We measured plasma MCP-1 (1 of 13 biomarkers, no adjustment for multiple testing) in the Stroke Prevention by Aggressive Reduction in Cholesterol Levels (SPARCL) trial, that compared atorvastatin 80 mg/d (ATV) to placebo (PLB) on the risk of stroke and major coronary events (COR: cardiac death or MI) in patients with recent stroke or transient ischemic attack but no coronary heart disease.

Methods: Baseline MCP-1 was measured in 1237 of 2366 PLB and 1144 of 2365 ATV patients. Time to recurrent stroke or first COR was evaluated by Cox proportional hazard models for quartiles of MCP-1 without and with adjustment for age, gender, smoking, diabetes, entry event, time since entry event, and geographic region.

Results: The median follow-up was 4.9 years. With quartile 1 (Q1) of ATV as the reference for all quartiles, Q4 of MCP-1 weakly associated with increased risk for secondary stroke in both ATV and PLB and this association was lost after adjusting for covariates (Table). In contrast, Q4 of MCP-1 strongly associated with increased risk for first COR in both PLB and ATV-treated patients even after covariate adjustment. ATV did not alter the risk associated with Q4.

Conclusion: MCP-1 levels identify the risk of initial major coronary events, but not that of secondary stroke. These data suggest MCP-1 contributes more to adverse events in the coronary than cerebral circulation.

Clinical Endpoint	Ref group: ATV Quartile 1 (n=299)	PLB, Quartile 4 (n=289)			ATV, Quartile 4 (n=302)		
		HR	95% CI	P	HR	95% CI	P
Stroke	Unadjusted	1.389	0.972, 1.985	0.0716	1.422	1.000, 2.022	0.0497
	Adjusted	1.165	0.808, 1.679	0.4131	1.229	0.862, 1.752	0.2552
Major coronary	Unadjusted	3.188	1.651, 6.157	0.0006	3.132	1.626, 6.033	0.0006
	Adjusted	2.800	1.443, 5.430	0.0023	2.777	1.436, 5.371	0.0024