

SUPPLEMENTARY RESULTS

Comparison of Absolute Hemodynamic Parameters

Kruskal-Wallis group-level comparisons of absolute hemodynamic parameters in the common carotid artery (CCA) are summarized in Supplementary Table 1. There was significant overall difference in the absolute full width at half maximum (FWHM) ($p=0.001$) among patient groups, while the remaining parameters showed no difference. Comparison of absolute hemodynamic parameters in the internal carotid artery (ICA) (Supplementary Table 2) showed no significant differences.

Pairwise comparisons of absolute FWHM, in the ICA and CCA, without with Holm correction for multiple comparisons are summarized in Supplementary Tables 3 and 4, respectively. Carotid web (CaW) and moderate atherosclerosis groups did not significantly differ in absolute FWHM in the CCA ($p=0.29$ uncorrected, $p=1$ corrected).

Supplementary Table 1 Comparison of Absolute CCA Parameters

Parameter*	Normal (n= 8)	Mild Atherosclerosis (n= 7)	Moderate Atherosclerosis (n= 6)	Severe Atherosclerosis (n=5)	Carotid Web (n=15)	p value**
	2174.16	2400.79	883.67	1647.36	1718.00	
AUC Total	(3096.25)	(3314.63)	(3673.77)	(1792.66)	(2846.22)	0.911
		1298.35	401.45	1003.46	498.30	
AUC WI	841.92 (2141.82)	(2161.15)	(2734.98)	(1083.22)	(1154.39)	0.570
	1280.02	763.41	576.72	836.58	1220.53	
AUC WO	(1344.38)	(1689.79)	(1284.85)	(1551.80)	(1370.07)	0.987
FWHM	2.52 (1.01)	2.50 (0.67)	1.90 (0.34)	2.70 (1.17)	1.36 (0.81)	0.001
TTP	2.25 (1.38)	2.00 (0.88)	1.50 (0.50)	1.75 (1.25)	1.50 (1.00)	0.093
		1042.15	458.90	758.18	797.50	
MS	561.50 (817.51)	(1680.20)	(2024.86)	(2027.84)	(2093.98)	0.908

*All hemodynamic parameters are reported as median (interquartile range)

**p-values: Kruskal-Wallis Test

AUC: area under the curve; WI: wash in; WO: wash out; FWHM: full width at half maximum; TTP: time to peak; MS: maximum slope during wash in

Supplementary Table 2 Comparison of Absolute ICA Parameters

Parameter*	Normal (n= 8)	Mild Atherosclerosis (n= 7)	Moderate Atherosclerosis (n= 6)	Severe Atherosclerosis (n=5)	Carotid Web (n=15)	p value**
	2135.28	2052.59	1136.67	1776.06	2361.60	
AUC Total	(3950.23)	(3657.38)	(3491.17)	(1707.27)	(3840.50)	0.901
		959.95	552.48	738.76	803.90	
AUC WI	966.48 (2067.10)	(1035.40)	(1216.27)	(771.96)	(1206.20)	0.926
	1381.83	1038.07	584.20	697.59	1587.80	
AUC WO	(1753.61)	(2035.98)	(2227.34)	(1346.50)	(2626.00)	0.665
FWHM	2.75 (0.83)	2.49 (0.35)	1.91 (0.50)	2.81 (1.34)	2.30 (1.14)	0.080
TTP	2.00 (1.50)	2.00 (0.88)	2.00 (1.00)	2.00 (1.25)	1.50 (1.50)	0.725
		701.86	547.14	566.22	597.90	
MS	559.43 (1045.95)	(1789.24)	(2768.95)	(1642.18)	(2524.00)	0.720

*All hemodynamic parameters are reported as median (interquartile range)

**p-values: Kruskal-Wallis Test

AUC: area under the curve; WI: wash in; WO: wash out; FWHM: full width at half maximum; TTP: time to peak;

MS: maximum slope during wash in

Supplementary Table 3 Pairwise Comparisons of Absolute FWHM in the ICA

a) Uncorrected p-values

	Mild	Moderate	Normal	Severe
Moderate	0.149	-	-	-
Normal	0.713	0.075	-	-
Severe	0.495	0.043	0.743	-
Web	0.468	0.325	0.251	0.143

b) Using Holm Correction

	Mild	Moderate	Normal	Severe
Moderate	1.00	-	-	-
Normal	1.00	0.67	-	-
Severe	1.00	0.43	1.00	-
Web	1.00	1.00	1.00	1.00

Supplementary Table 4 Pairwise Comparisons of Absolute FWHM in the CCA

a) Uncorrected p-values

	Mild	Moderate	Normal	Severe
Moderate	0.043	-	-	-
Normal	0.708	0.019	-	-
Severe	0.778	0.027	0.937	-
Web	0.001	0.288	<0.001	<0.001

b) Using Holm Correction

	Mild	Moderate	Normal	Severe
Moderate	0.217	-	-	-
Normal	1.00	0.131	-	-
Severe	1.00	0.162	1.00	-
Web	0.006	1.00	0.002	0.004