

Online Supplemental Table 1. Motion Evaluation

	None-0	Minimal-1	Mild-2	Moderate-3	Severe-4	p-value
Conventional	4	2	7	9	3	P=0.16
DANTE-SPACE	5	3	5	8	4	
Conventional	27	11	10	13	3	P<0.001
DANTE-CAIPI-SPACE	45	4	7	4	4	

Online Supplemental Table 2. Arterial Non-Suppression Artifacts

	pICA	cICA	scICA	M1	M2	A1	A2	P1	P2	VA	BA	Aneurysm
Conventional	13	-	-	-	3	-	-	-	2	20	1	1
DANTE-SPACE	-	-	-	-	-	-	-	-	-	1	-	-
Conventional	27	1	-	2	6	-	-	-	2	47	1	1
DANTE-CAIPI-SPACE	3	-	-	-	-	-	-	-	-	-	-	-

pICA= petrous ICA, cICA=cavernous ICA, scICA=supraclinoid ICA, VA=vertebral artery, BA=basilar artery.

Online Supplemental Table 3. Venous Non-Suppression Artifacts

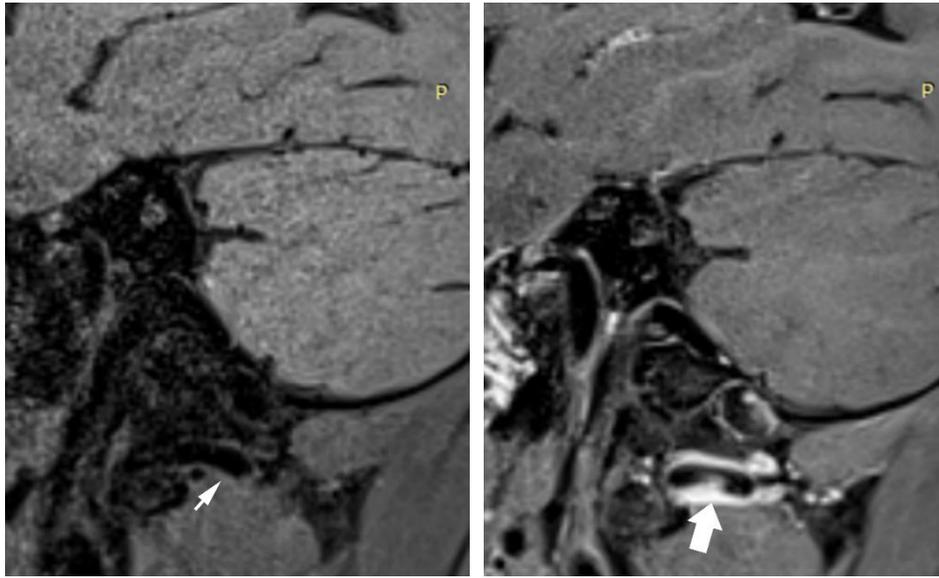
	Cortical Venous	Dural Sinus	Deep Venous
Conventional	21	11	6
Dante-SPACE	3	1	-
Conventional	37	21	6
DANTE-CAIPI-SPACE	-	2	-

Online Supplemental Table 4. Inter-reader agreement

	Reviewer 1	Reviewer 2	ICC
Qualitative Measurements			
Image quality	2 (2, 3)	2 (2, 3)	0.771 (0.694, 0.829)
SNR	2 (1, 2)	2 (2, 2)	0.798 (0.730, 0.849)
Artifacts	3 (2, 4)	3 (2, 4)	0.779 (0.697, 0.838)
Blood Suppression	2 (1, 3)	2 (1, 3)	0.828 (0.769, 0.871)
Lesion	2 (1, 2)	2 (1,3)	0.745 (0.654, 0.811)
Vein	2 (1, 3)	2 (2, 3)	0.898 (0.865, 0.923)
Motion	1 (0, 2)	1 (0, 2)	0.938 (0.917, 0.954)
Quantitative Measurement			
Lumen Area (mm ²)	6.8 (4.7, 9.5)	6.6 (4.5, 9.2)	0.969 (0.947, 0.982)
Wall Area (mm ²)	13.4 (10.6, 16.1)	12.3 (10.8, 15.9)	0.942 (0.904, 0.965)
Lumen CR	0.42 (0.27, 0.65)	0.39 (0.29, 0.55)	0.809 (0.697, 0.882)
Wall Lumen CR	2.2 (1.8, 2.7)	2.4 (1.9, 2.8)	0.765 (0.613, 0.858)

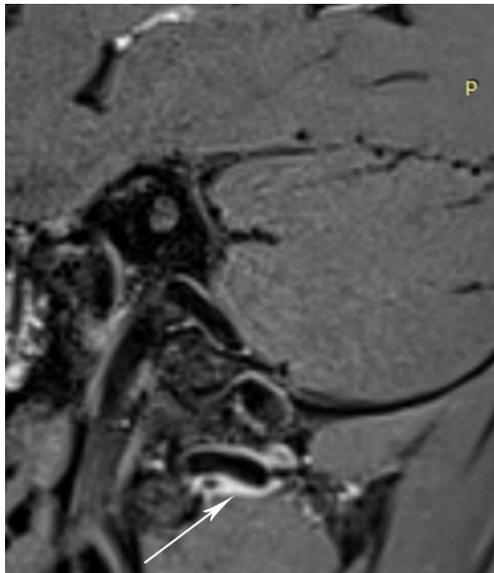
ICC two-way random, average measure, absolute agreement

Online Supplemental Figure 1.



A.

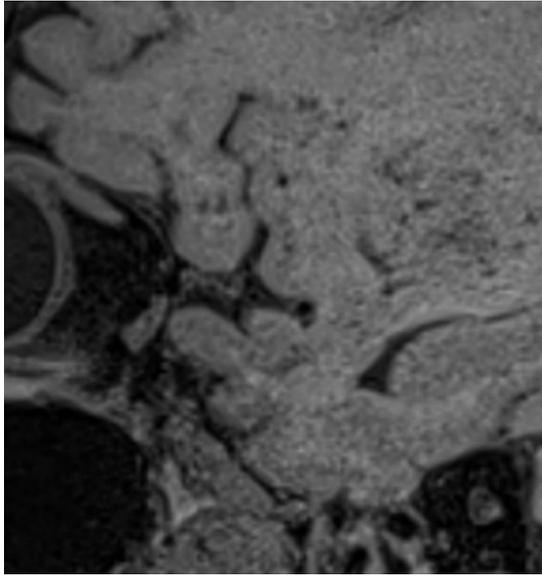
B.



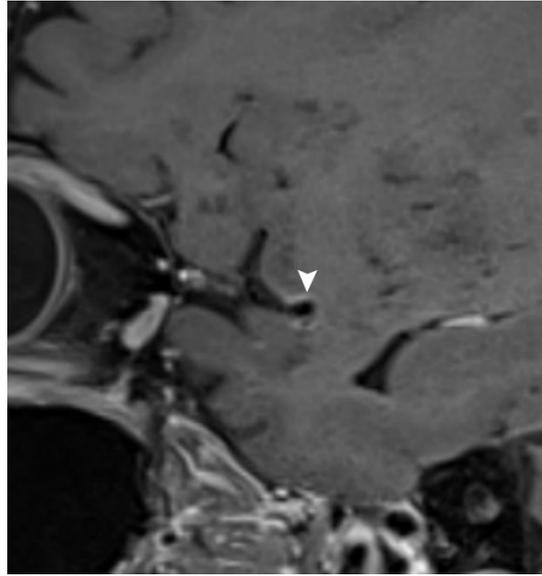
C.

Online Supplemental Figure 1. Sagittal T1-w SPACE pre- (A) shows complete arterial blood suppression of the left V3 vertebral artery, however, there is the appearance of intraluminal enhancement and wall thickening (thick arrow) on T1-SPACE post-contrast (B). On T1-DANTE-CAIPI-SPACE (C), there is complete suppression of arterial blood flow, without evidence of wall thickening or intraluminal lesion (long arrow).

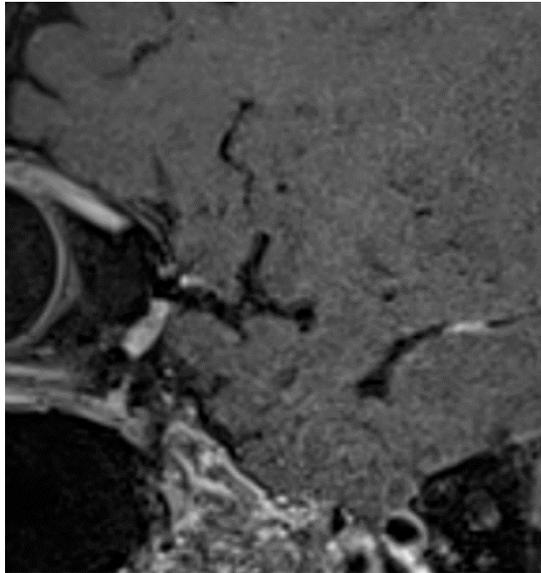
Online Supplemental Figure 2.



A.



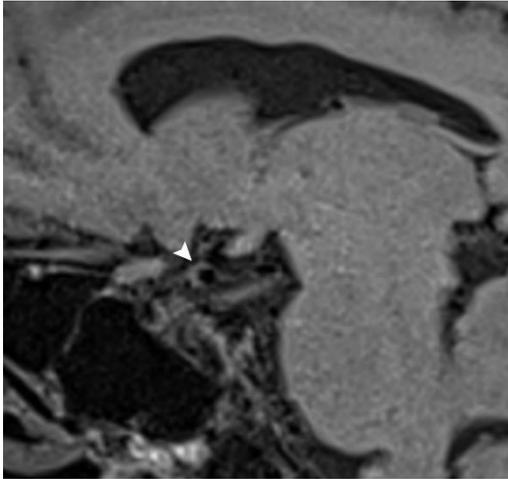
B.



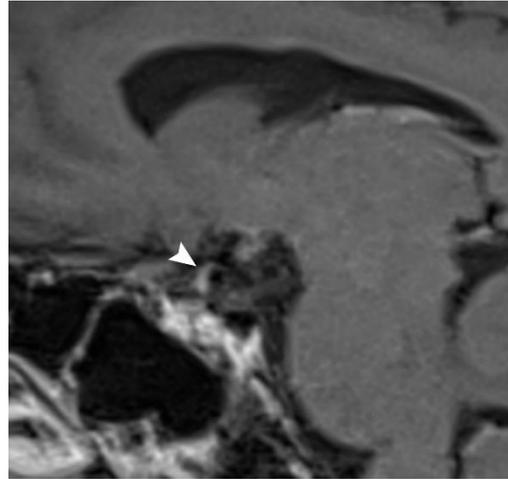
C.

Online Supplemental Figure 2. Sagittal pre-contrast T1-weighted SPACE (A) shows no abnormality of the left M1 MCA segment, without evidence of wall thickening or abnormality. Sagittal post-contrast T1-weighted SPACE (B) shows wall enhancement along the superior, inferior and posterior walls of the M1 MCA (arrowhead). On sagittal T1-DANTE-CAIPI post-contrast SPACE acquisition (C), the apparent enhancement is not visualized.

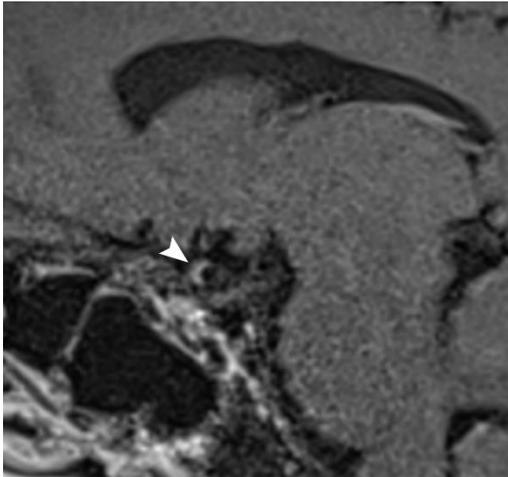
Online Supplemental Figure 3.



A.



B.



C.

Online Supplemental Figure 3. Sagittal T1-weighted SPACE pre-contrast (A) shows eccentric wall thickening involving the right supraclinoid ICA (arrowhead). Sagittal T1-weighted post-contrast SPACE (B) shows eccentric wall thickening with outward remodeling (arrowhead), corresponding to atherosclerotic lesion. There is blurring of the lesion margins and the exact lesion margins. Sagittal post-contrast T1-DANTE-CAIPI SPACE (C) similarly shows eccentric enhancing atherosclerotic lesion (arrowhead) which shows sharper, better delineated margins, compared to the T1-weighted SPACE post-contrast acquisition.