

Online Supplementary Material

Supplementary Table 1. Subgroup analysis of BB effect according to scan order

Sequences	Locations	Scan order		<i>p</i> -values
		MSDE first and then DANTE (n=24)	DANTE first and then MSDE (n=26)	
3D-T1-FSE	A3	3.75	3.42	0.043
with DANTE	M3	3.54	3.92	0.072
	P2 to P3	3.91	4.00	0.302
	ICV	1.79	1.50	0.363
	M1	3.50	3.69	0.266
3D-T1-FSE	A3	3.95	3.84	0.193
with MSDE	M3	3.83	3.61	0.181
	P2 to P3	3.91	3.80	0.346
	ICV	3.54	3.73	0.450
	M1	3.66	3.65	0.940

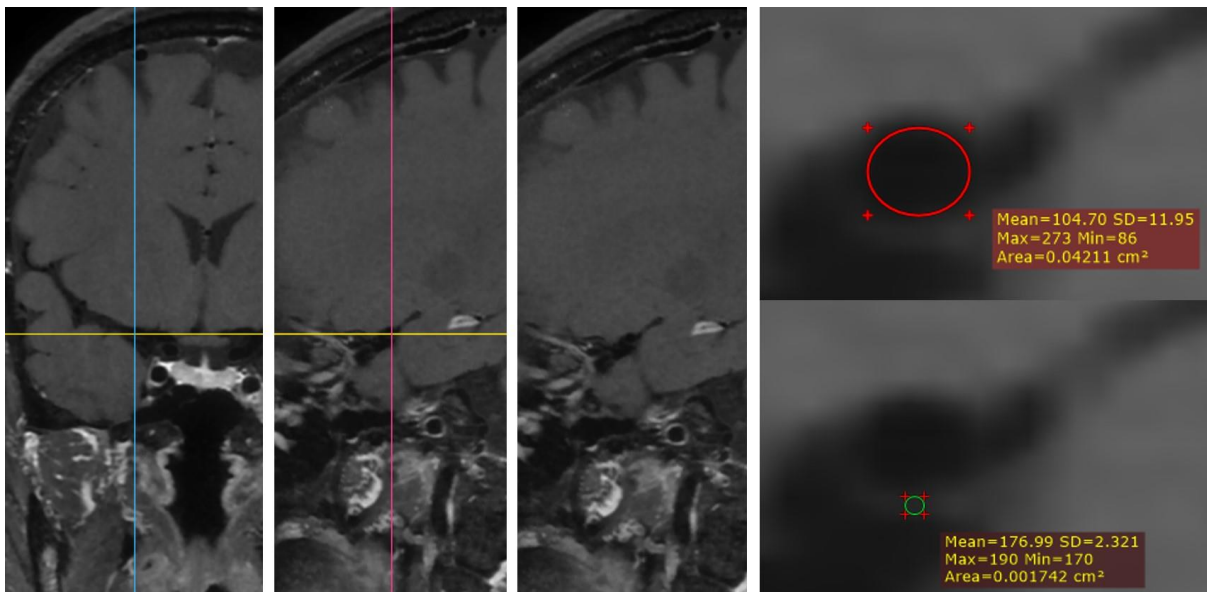
Supplementary Table 2. Inter-observer agreements between the raters for qualitative and quantitative analysis

	Inter-observer agreement
Qualitative analysis	0.78* (95% CI: 0.69-0.86)
Black-blood visual scoring	
Quantitative analysis	0.71†(95% CI: 0.63-0.77)
Signal-to-noise ratio	

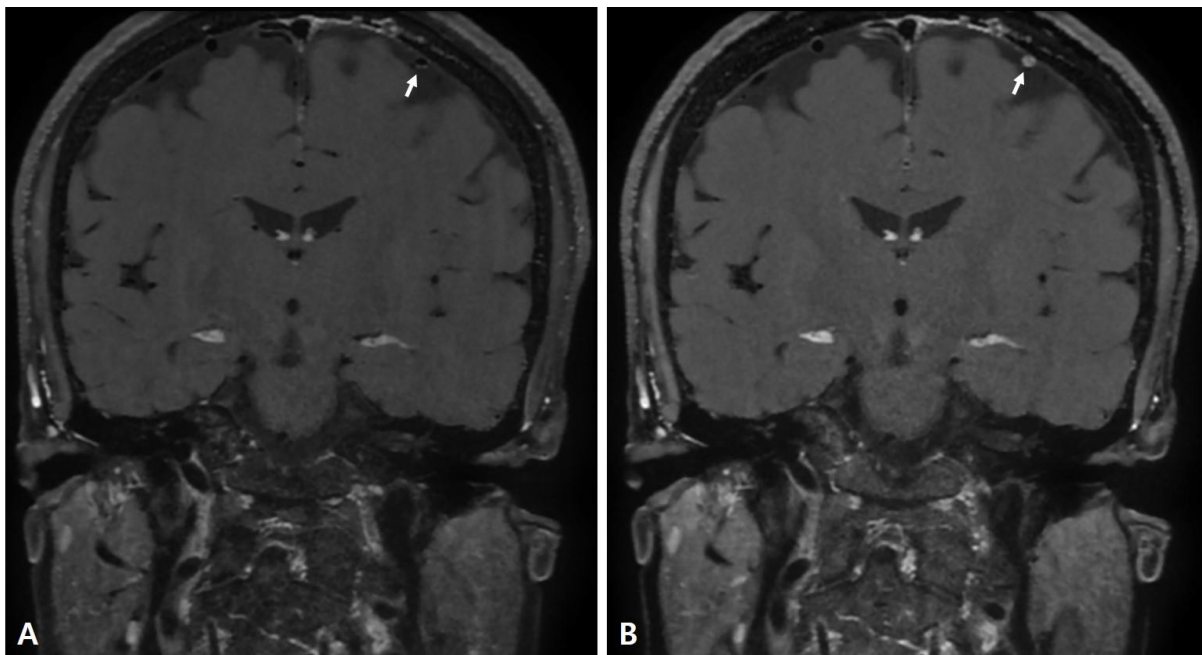
CI = confidence interval

*Weighted-kappa, †Intraclass correlation coefficient.

Supplementary Figure 1. ROI measurement technique. By using RadiAnt DICOM viewer (<http://www.radiantviewer.com/>) with 3-plane reconstructed views, targeted vessel wall and vessel lumen was evaluated at sagittal plane of each exam. Elliptical ROIs were drawn to measure maximum size of the vessel lumen uncontaminated by artifacts. Circle ROIs were drawn to measure signal intensities of the vessel wall at the most well delineated site.



Supplementary Figure 2. Coronal images of cortical vein were obtained from CE 3D-T1-FSE with MSDE (A) and that with DANTE (B). Complete blood suppression in small cortical vein is observed on the CE 3D-T1-FSE with MSDE (A, arrow); however, nonsuppression of blood signal in the identical cortical vein is observed on the CE 3D-T1-FSE with DANTE (B, arrow).



Supplementary Figure 3. Coronal images of transverse sinus were obtained from CE 3D-T1-FSE with MSDE (A) and that with DANTE (B). Complete blood suppression in the right transverse sinus is observed on the CE 3D-T1-FSE with MSDE (A, arrow); however, nonsuppression of blood signals in the identical transverse sinus is observed on the CE 3D-T1-FSE with DANTE (B, arrow).

