Collateral Perfusion Using Arterial Spin Labeling in Symptomatic Versus Asymptomatic Middle Cerebral Artery Stenosis

Supplementary Figure 1

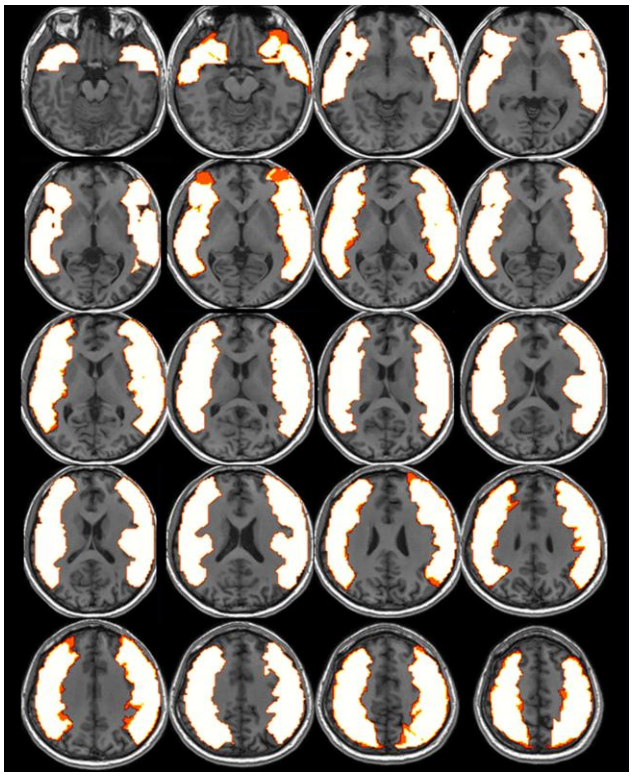

Figure Caption: The MCA masks were mainly covered leptomeningeal region of MCA territory, and basil ganglia region and deep white matter were not covered. Picture is from JH Lyu et al. (Stroke 2016; 47: 428-433.) with permission.

Supplementary Figure 2

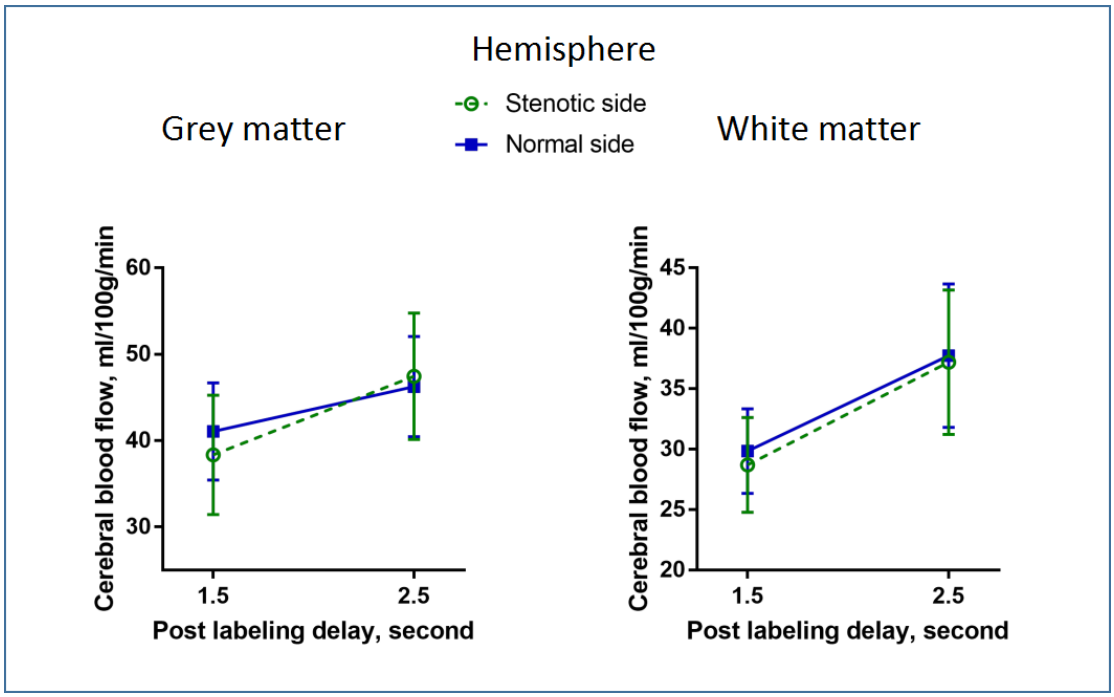

Figure Caption: Mean CBF of grey matter and white matter for bilateral MCA territories from PLD 1.5s to 2.5s in symptomatic patients. Mean CBF of 2.5s was significantly higher in the MCA territory than that of 1.5s ($F(1, 32)=41.943$, $p<0.001$ for grey matter, and $F(1, 32)=134.464$, $p<0.001$ for white matter), while the CBF of stenotic territory shows greater increase than that of normal side from PLD 1.5 to 2.5s but reaches no significance both in grey matter or white matter regions of these 18 symptomatic patients ($F(1, 32)=3.187$, $p=0.084$ for grey matter, and $F(1, 32)=0.189$, $p=0.667$ for white matter).

Supplementary Figure 3

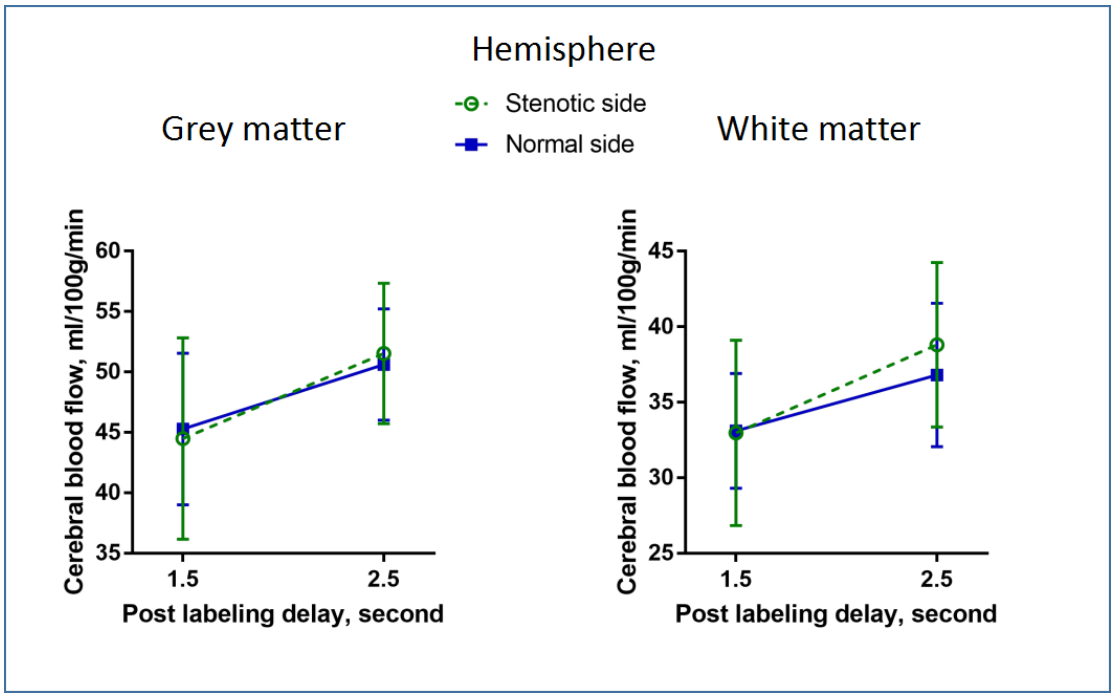

Figure Caption: Mean CBF of grey matter and white matter for bilateral MCA territories from PLD 1.5s to 2.5s in asymptomatic patients. Mean CBF of 2.5s was significantly higher in the MCA territory than that of 1.5s ($F(1, 20)=47.598$, $p<0.001$ for grey matter, and $F(1, 20)=22.365$, $p<0.001$ for white matter), while the CBF of stenotic territory shows greater increase than that of normal side from PLD 1.5 to 2.5s but reaches no significance both in grey matter or white matter regions of these 11 asymptomatic patients ($F(1, 20)=0.916$, $p=0.350$ for grey matter, and $F(1, 20)=1.109$, $p=0.305$ for white matter). df=degree of freedom.

Supplementary Figure 4

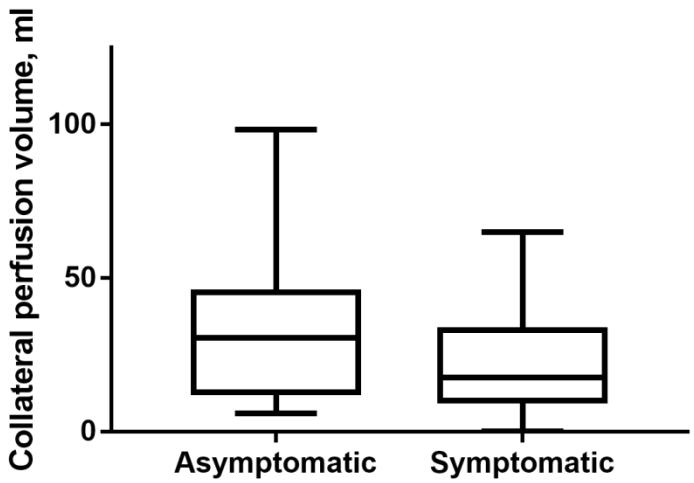

Figure Caption: Collateral perfusion volume measurements in asymptomatic patients and symptomatic patients.

Supplementary Figure 5

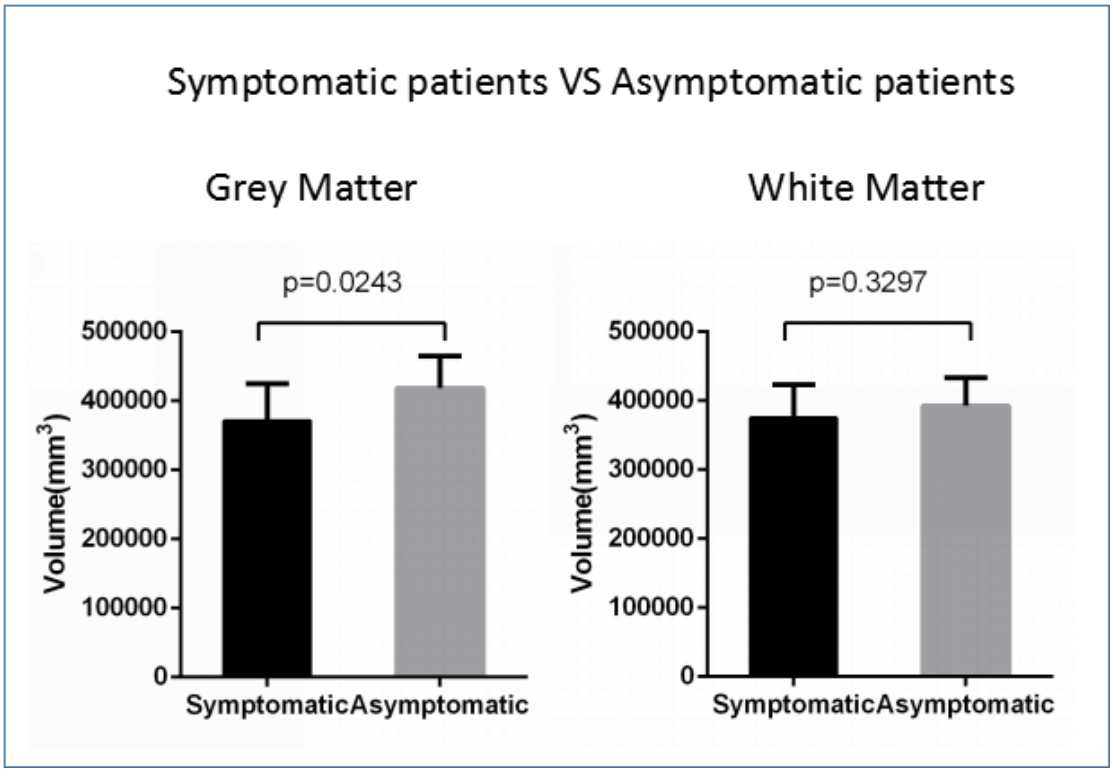

Figure Caption: Grey matter and white matter volume comparison between symptomatic patients and asymptomatic patients. Grey matter volume of asymptomatic patients was significantly larger than that of symptomatic patients (p=0.0243) while white matter volume showed no significant differences between groups.

Supplementary Figure 6

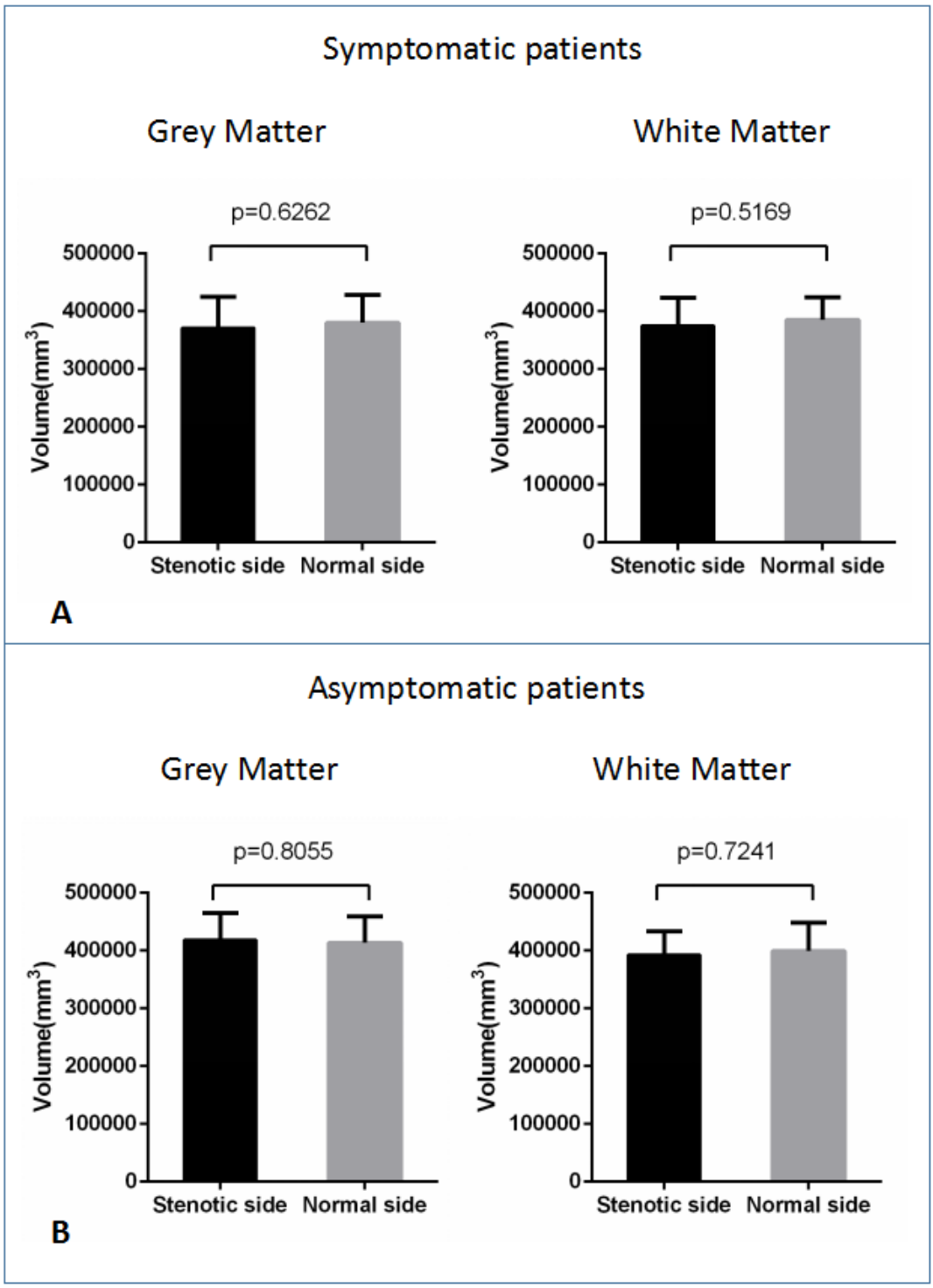

Figure Caption: Grey matter and white matter volume comparison between stenotic side and normal side MCA territory separately for symptomatic patients (A: 371592±53140mm^3 versus

380175±48505mm^3, 375306±48209mm^3 versus 385136±38720mm^3, respectively) and asymptomatic patients (B: 418473±46416mm^3 versus 413567±45799mm^3, 392720±40223mm^3 versus 399524±48535mm^3, respectively). No significant differences of grey matter and white matter volume are detected between bilateral hemisphere in symptomatic and asymptomatic patients.