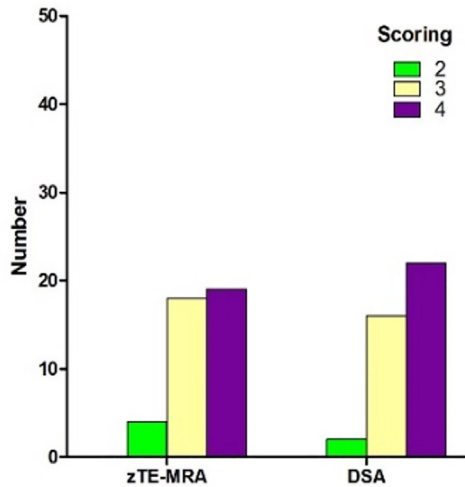
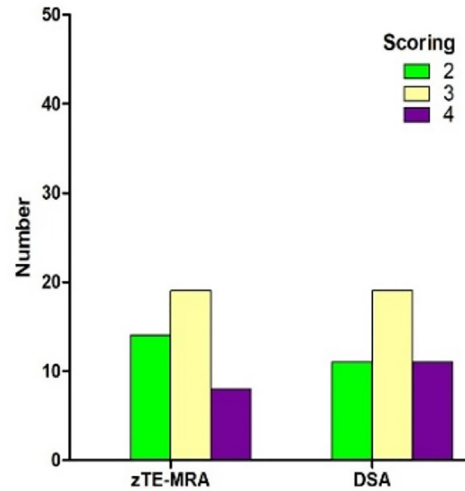


Image quality comparison between TOF-MRA and zTE-MRA

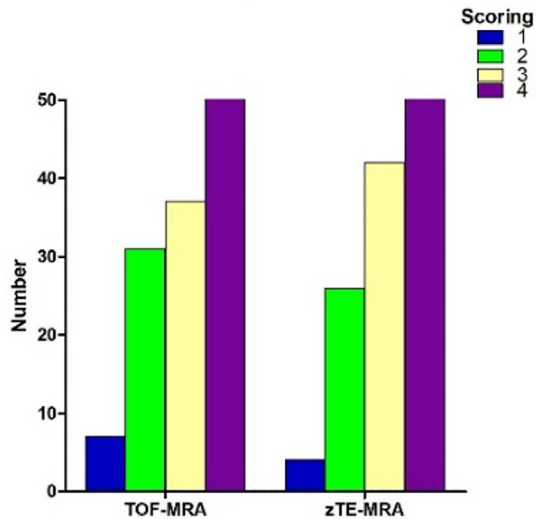
A Flow signal scoring of Middle cerebral arteries (M1)



B Flow signal scoring of Basilar artery



C Susceptibility artifact scoring of Middle cerebral arteries (M1)



D Susceptibility artifact scoring of Basilar artery

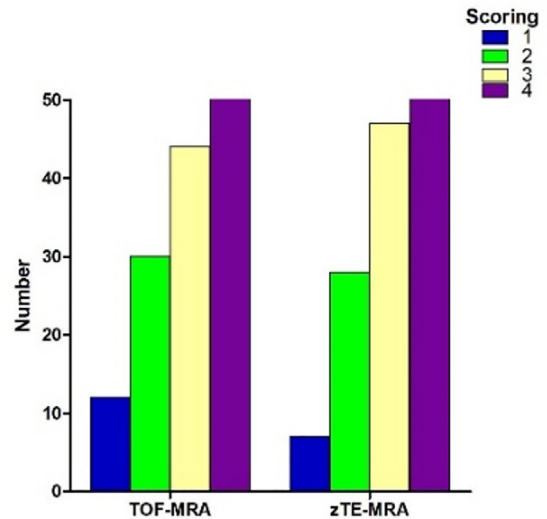


Figure S1 As shown in the following figure, in middle cerebral arteries (MCA) M1 and basilar artery (BA) regions, zTE-MRA showed significantly higher imaging quality than TOF-MRA images in terms of susceptibility artifact (M1: mean score, 3.39 ± 0.82 vs. 3.31 ± 0.90 , Wilcoxon rank test, $P < 0.001$, *Figure S1A* and, BA: mean score, 3.29 ± 0.87 vs. 3.20 ± 0.95 , Wilcoxon rank test, $P < 0.001$, *Figure S1B*). Moreover, flow signal scores in zTE-MRA were also significantly higher than those in TOF-MRA in M1 (mean score, 3.68 ± 0.47 vs. 3.58 ± 0.49 ; Wilcoxon rank test, $P = 0.046$, *Figure S1C*) and in BA (mean score, 3.68 ± 0.47 vs. 3.56 ± 0.54 ; Wilcoxon rank test, $P = 0.025$, *Figure S1D*).