ON-LINE FIG 1. Sample ASPECTS ASL grading using both PASL (*A*) and VSASL (*B*) data. PASL is evaluated first for areas of delayed (D) perfusion or nondelayed (ND) perfusion. Then VSASL is evaluated for incomplete (IC), complete (C), or absent perfusion (which was not seen in this study). From this assessment, the appropriate score could be assigned.
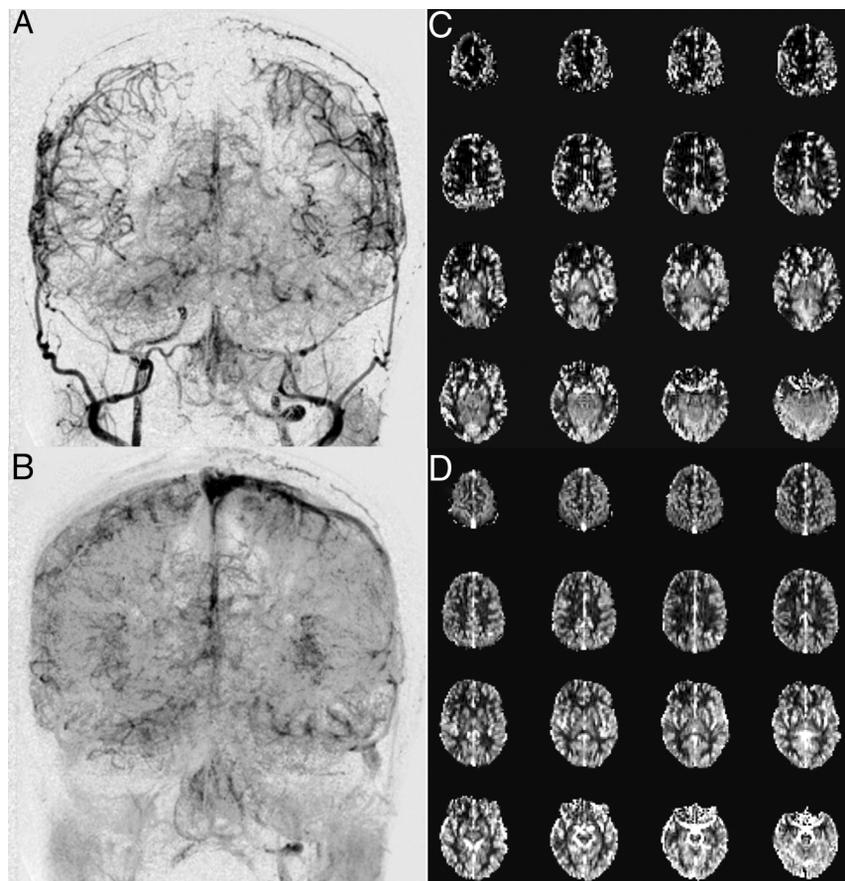
ON-LINE FIG 2. Representative DSA data (*A* and *B*), PASL CBF maps (*C*), and VSASL CBF (*D*) maps for a patient post-bilateral synangiosis. The DSA composite is based on frontal overlays from the external carotid artery, ICA, and vertebral artery injections. *A*, Composed of frames corresponding to a postinjection delay of ∼2 seconds (corresponding to PASL-PLD). *B*, Composed of frames corresponding to the parenchymal phase, regardless of postinjection time. *C* and *D*, The analogous PASL and VSASL data, respectively, which mimic DSA counterparts.
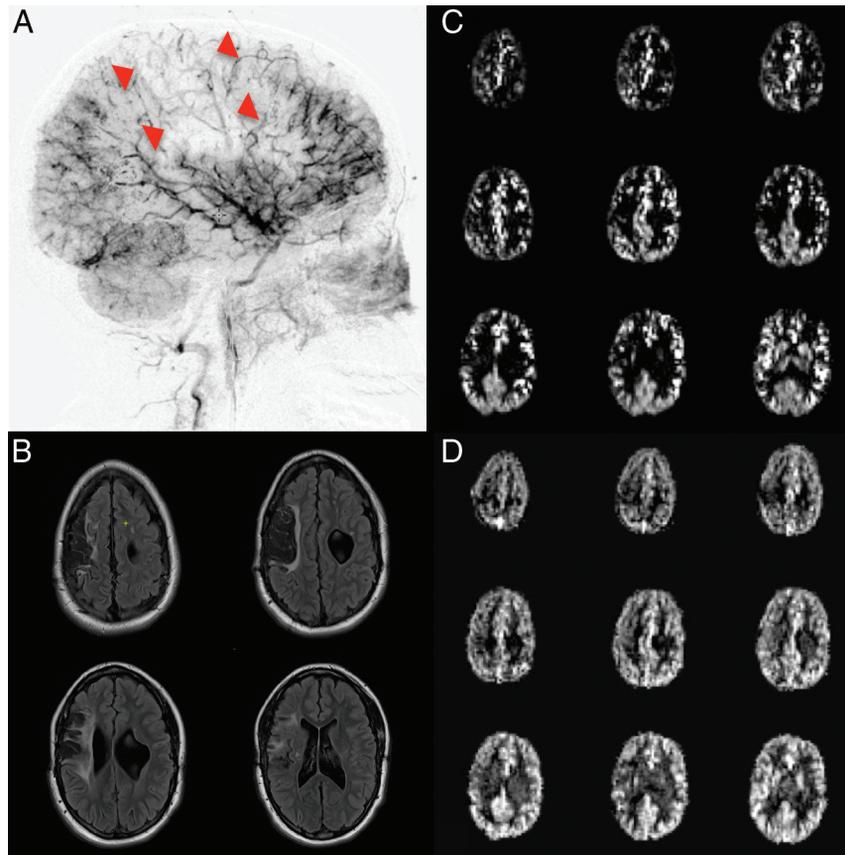
ON-LINE FIG 3. DSA (*A*), FLAIR (*B*), PASL (*C*), and VSASL (*D*) data for a patient post-bilateral pial synangiosis, also known to have a chronic right MCA infarct. The lateral DSA composite is generated from overlaying right ICA, external carotid artery, and vertebral artery parenchymal phases. A region of the right MCA hypoperfusion (*red arrowheads*) corresponds to infarct on FLAIR. VSASL-CBF maps accurately capture diminished perfusion in this region, whereas PASL cannot discriminate this region from those affected by transit delay artifact.