



Supplemental Figure 10. Forceps Minor Tractography Using Ipsilesional and Contralesional Seed Regions.

Anterior views of forceps minor tracts are shown using a region of interest (ROI) ipsilateral to the left frontal contusion and a homologous ROI contralateral to the left frontal contusion. The deterministic tractography data generated from each seed ROI are superimposed on a coronal diffusion-weighted image (DWI) at the level of the genu of the corpus callosum and an axial DWI at the level of the orbitofrontal cortex. Tracts are color-coded by direction (bottom right arrows). In the ipsilesional analysis (top panel), the same ROI shown in Figure 2 was used as a seed to reconstruct the forceps minor tracts. In the contralesional analysis (bottom panel), an ROI with identical size, shape, and anatomic location with respect to the grey-white junction was placed in the right hemisphere. The seed ROIs (each 4x4 voxels) are shown in orange in the top-right inset, superimposed on blue, semitransparent virtual slides. In both tractography analyses, a frontal cortico-cortical bundle was removed to isolate the forceps minor tracts. Visual inspection and quantitative tractography analyses reveal that the contralesional ROI generates more forceps minor tracts (282 tracts) than does the ipsilesional ROI (111 tracts). Furthermore, regardless of where the seed ROI is placed, the forceps minor tracts terminate prematurely in the left hemisphere (i.e. before reaching their left frontal cortical targets) due to the contusion. These results highlight the disruption of forceps minor tracts by the left frontal contusion. Abbreviations: Cd = caudate; L = left; R = right.