Supplementary Material

C:\Users\윤복선\Desktop\LM\supple 1.tif

**Supplementary Fig. 1.** Red box number 1 is used for the full-sized representative images. Red boxes 1-3 indicate the location for the quantitative analysis. We used the average of the three regions in the analysis.

**F:\LM 논문\20191210 LM figure 수정1000\supple 3.tif**

**Supplementary Fig. 2**. Immunofluorescence staining of glutamate transporter-1 (GLT-1). GLT-1 (red) expression was found to increase in the cortex of the asymmetric group, compared with the symmetric group. The shape of the GLT-1 positive cells was not clearly distinguishable between cell types; however, they looked like astrocytes in the hippocampus (arrows).

**F:\LM 논문\20191210 LM figure 수정1000\supple 4.tif**

**Supplementary Fig. 3.** Variations in the circle of Willis were evaluated using a low magnification microscope. Despite our best efforts, differentiation could not be performed due to the small size of the structures. The yellow and red arrows indicate PComA and AComA, respectively. PComA, posterior communicating artery; AComA, anterior communicating artery, BA, basilar artery.