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Hyperintense Lesions in FLAIR MRI

Studies have found links between decreased cognitive abilities and lesions in white matter and periventricular regions of the brain. Fluid attenuated inversion recovery (FLAIR) magnetic resonance imaging is the best method for viewing these lesions because they appear as hyperintense areas in the brain. A study was underway at the Center for Magnetic Resonance Research involving subjects who had mild to moderate traumatic brain injuries (TBI), little to no anatomical abnormalities in the brain, and a degree of decreased cognitive abilities since the injury. I was allowed to do a small study within this study to grade and analyze any hyperintensities in the brains of subjects and controls. Ten controls and nine TBI subjects were studied. A Mann-Whitney test found no statistical evidence for a difference between controls and subjects. I also benchmarked and analyzed the hyperintensities in the FLAIR scans of a study on normal aging on the brain. Since the study is ongoing and I am currently working on a UROP that deals with other aspects of MRI imaging, further analysis of the hyperintensities in the data will not be done by me.



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