

POSTER 1

ANALYSIS OF THE CEREBELLUM IN INDIVIDUALS WITH AUTISM SPECTRUM DISORDER USING MAGNETIC RESONANCE IMAGING

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Autism spectrum disorder (ASD) is a neurodevelopmental disorder that affects approximately 1 of every 150 people in the US population. Individuals with ASD have been shown to display deficits in motor coordination, suggesting structural changes in the cerebellum relative to typically-developing individuals. In fact, previous studies have shown individuals with ASD to have increased volume of the cerebellum. The purpose of this study is to examine the cerebellum in adolescents with ASD to determine whether there are differences in the component structures of the cerebellum.

Magnetic resonance images were acquired from a sample of male adolescents with ASD and age-matched control individuals (13-21 years). We collected volumes of the whole cerebellum, cerebellar gray matter (CGM) and cerebellar white matter (CWM). Results show slight increases in CGM and CWM in ASD, though overall cerebellar volume was not significantly different. Our results show that there are differences in the volumes of the component structures of the cerebellum. These differences may provide the structural basis for deficits in motor coordination observed in individuals with ASD.