Severity and Verbal Distinctions of Autism from Birth (Non-Regressive) vs. Autism with Age On-Set After Birth (Regressive)

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Autism is a developmental disorder with an increasing trend in diagnosis has been noted since 1990. Autism has a broad range of diagnostic features which include social impairments, repetitive gestures, limited ability to communicate or communicate coherently, and obsession with patterns and order. Little is understood about the causes of autism due to the complexities of behavior and neural development. Regressive autism is defined by onset of autism after a period of normal development. Regression may suggest an environmental trigger of the disorder.

Regressive, non-regressive, and control participants between 3-13 years of age were matched by age and gender. All regressive and non-regressive subjects met DSM-V criteria for autistic diagnosis. Developmental history was collected using the Autism Diagnostic Interview-Revised (ADI-R), a parental/guardian interview. Clinical observation was made using the Autism Diagnostic Observation Schedule (ADOS). Other measurement of abilities included: Social Responsiveness Scale, adaptive function (Vineyard), attention skills (Conners), language ability (CELF), and IQ tests. The groups were compared to determine if regression and classical autism would differ in severity and to see if regression status could predict other abilities.

Comparison of means showed an overall trend of severity to lean toward the regressive groups for most measurements. Both autistic groups were statistically distinct from the control group except in serotonin. Significant statistical differences (p<0.05), with regression being more severe, were noted on the following assessments and sub-scores: ADOS-1: social; ADOS-2: communication, daily skills, socialization, adaptive behavior, and. No distinctions could be made with respect to serotonin data. Analysis of CELF results indicated that a higher portion of regressive subjects compared to classic autism had such impaired language the test could not be administered. On the ADI-R regressive subjects were more likely to take the non-verbal than the verbal assessment compared to classic autism.

To further investigate whether the noted severity trend was due to language ability or due to regression status, verbal and non-verbal subjects were compared on the same measurements. A significant non-distinction between means was noted. Non-verbal classic and regression autism had more severe mean scores than verbal classic and regressive autism respectively compared with significant differences (p<0.05) on Vineland assessments. This led us to believe that severity is due to learning impairment as a condition of non-verbal status rather than neurological deficit.