July 2011: Article Summary

Early Developmental Regression

Approximately one third of children with autism spectrum disorder (ASD) lose some skills before they begin school. Often speech skills are lost, but it is sometimes non-verbal communication skills and play skills. This loss of skills is known as early developmental regression (EDR). EDR is usually defined as the loss of skills that have been previously acquired before the age of three years. However, this definition is not universally agreed upon, and therefore the rates, features, duration and outcomes of EDR in autism have been found to vary. A recent study looked at rates and features of EDR in children with ASD and compared the findings to other research.

The Study

The children who were part of the study were found by the International Molecular Genetic Study of Autism Consortium (IMGSAC), a group of organisations researching the genetics of autism. The 458 participants of the study were from multiplex families. These are families in which two or more members have ASD.

The Definition of Early Developmental Regression (EDR)

In this study, EDR was defined as the loss of speech and/or other skills which had been present for at least three months. This loss in skills had to occur before the age of three years. Nineteen children were excluded from the study because their age of regression was unknown or over the age of three years.

Rate of Early Developmental Regression (EDR)

Of the 439 remaining participants, 105 (or 24%) suffered from EDR. This is similar to the rate of EDR in singleton families, in which only one member has ASD.

Characteristics of Children with Early Developmental Regression (EDR)

The average age for losing skills was 21.3 months. A similar percentage of males (25%) and females (20%) were found to lose skills. A similar percentage of first (22%) and second born (26%) children were found to regress. There were no effects of birth order on whether a child experienced EDR.

Development after Early Developmental Regression (EDR)

Of the 105 children who had EDR, 14 (13%) had not regained the skills, or were continuing to regress at the time the study was conducted. Eleven of these children had lost language skills.

The remaining 91 children (87%) showed developmental progress after the regression and regained the skill they had lost to the same level. Eighty nine percent of these children had lost language; just over half had lost only language and the rest had lost language and other skills (most commonly social skills, followed by play skills and adaptive skills). For the 11% of the children who did not lose language skills, social or other skills were most commonly lost, except for one child who lost motor skills only.

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Comparison of the Early Developmental Regression (EDR) Group with Children who did not Regress

Compared with the children who did not experience EDR, children who regressed had more severe symptoms of ASD, lower IQs and poorer adaptive behaviour (age appropriate behaviour required for everyday living, e.g., dressing, communication, safety, etc).

Conclusion

This study found that 24% of children with ASD in the sample experienced early developmental regression (EDR). The average age for regression was 21.3 months. A similar percentage of boys and girls regressed, and birth order did not affect regression. Most of the children who regressed lost either language alone, or language and some other skill. After the EDR most (87%) children gained back the skills they had lost and showed developmental progression. The children with EDR had lower IQs, poorer adaptive skills and more severe symptoms of ASD than the children who did not regress.

Reference

Parr, J. R., Le Couteur, A., Baird, G., Rutter, M., Pickles, A., Fombonnne, E. & Bailey, A. J. (2011). Early developmental regression in autism spectrum disorder: Evidence from an international multiplex sample. Journal of Autism and Developmental Disorders, 41 (3), 332-340.

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