

International Conference on

Pediatric Pharmacology and Therapeutics

12th International Conference on

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Pediatric, Perinatal and Diagnostic Pathology

July 13-14, 2018 | Toronto, Canada

Intranasal Oxytocin as behavioral pharmacotherapy in autism spectrum disorder

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Background: Autism Spectrum Disorder (ASD) is hypothesized to result from an impairment in social motivation leading to impaired development of social cognition over time. Oxytocin is a mediator of social motivation and has the potential to improve socially responsive behavior in children with ASD. The purpose of this review is to provide an appraisal of current literature on the effect of intranasal oxytocin on behavior in children with autism spectrum disorder.

Methods: The literature search was completed using the PubMed, CINAHL, Scopus, and Web of Science databases. The search terms are as follows: Autism and intranasal oxytocin and children and behavior. Publications of all types from the years 2012 to 2017 were included.

Results: The searches yielded a total of 63 articles, 7 of which met inclusion criteria after full-text review. One study found a statistically significant improvement in socially responsive behavior. Two studies identified enhanced brain activity on fMRI during social information processing activities. These results point more towards oxytocin's role in enhancing social motivation and learning in combination with reinforcing social stimuli rather than as a direct mediator of behavior changes.

Interpretation: The evidence supporting the use of intranasal oxytocin to impact behavior in autistic children is of low to moderate quality. Small sample sizes and the indirectness of some of the outcomes measured are primary barriers to drawing conclusions about the clinical applicability of this intervention. Further randomized controlled trials are needed before this intervention can be considered for use in a clinical setting.

Biography

Treeah Majors has completed her Bachelor of Science in Nursing from Emory University and her Master of Science in Nursing from the University of Pennsylvania. She is currently practicing as a Family Nurse Practitioner.

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