

Effect of vitamin D in autistic children: A double blinded placebo controlled pilot trial

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Abstract

Autistic spectrum disorder is a neurodevelopmental disorder with an unknown and somewhat controversial etiology. Vitamin D deficiency has been proposed as an important key player in the development and progression of autism spectrum disorders (ASDs) yet no prior double blinded trials have been conducted. It remains under debate whether children with autism should be supplemented with high doses of vitamin D to improve their symptoms. ASD patients were randomized in a double blinded placebo controlled trial to receive either 1000 international units of vitamin D per day for 3 month, followed by 1000 international units per 25 pounds per day (average dosing was 2800 IU/day) for another 3 months (n=22) or placebo (n=20). The primary outcome measures were changes in Childhood autism rating scale (CARS) and Autism treatment evaluation checklist (ATEC) scores. Secondary outcome measures were the changes in serum vitamin D levels as well as treatment emergent side effects. After 6 months of therapy, there were statistically significant improvements in CARS (4 points) and ATEC overall scores (16 points) in vitamin D group compared to placebo ($p<0.001$) with 31.8% of patients shift from severe range to mild-moderate range and 63.3% of patients reached the cut-off point of 30. There were no correlations between serum vitamin D levels and either CARS or ATEC scores were found. Finally, Vitamin D supplementation was tolerable and significantly improved clinical measurements of ASD severity.

Biography

Sarah Farid Mohamed Fahmy is a PhD student and Assistant Lecturer in Clinical Pharmacy Department, Faculty of Pharmacy, Ain Shams University, Cairo, Egypt. She has published two papers in the field of autism.

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