

Decreasing the Oxidative Stress in Autistic Children: A Randomized Double-Blind Controlled Study With Palm Dates Fruit

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Abstract : The link between various diet therapies and autism is controversial and limited. Nutritional interventions aim to increase antioxidant levels suggesting a positive effect on the improvement of autism severity. In this study, the effectiveness of a 90-day Dates fruits consumption fruits (a non-pharmacological and risk-free option) on alleviating autism severity symptoms in individuals with ASD was investigated. The study examined also whether the baseline or improvements of some of the clinical and laboratory characteristics of the subjects affected their response to dates fruits intake on the severity of ASD symptoms. Methodology: This study involved a randomized controlled, double-blind 3-month dates fruits intake. 131 Egyptian children aged 3-12 years with confirmed ASD were enrolled in the study. cases were randomized in one of the three groups as follows; 1st regimen: Group I on 3 dates' fruits/day (47 cases), 2nd regimen: Group II on 5 dates' fruits/day (42 cases), and 3rd regimen: group III; nondates group (42 cases). ASD severity was assessed using both the Diagnostic and statistical manual of mental disorders, 5th ed. (DSM-V) criteria and the Childhood Autism Rating Scale (CARS) analysis. The following measures were assessed before and after the regimens: blood levels of three oxidative markers; Malondialdehyde (MDA), glutathione peroxidase (GPX1), and superoxide dismutase (SOD), nutritional, dietary assessment & anthropometric measurements Results: A significant reduction in the mean score of autism was detected based on CARS scores for those on dates' regimens compared to those on non-dates ($p < 0.01$). Participants on 5 dates' fruits/day for three months showed the highest improvement for autism severity based on both CARS and DSM5 compared to those in 3 dates' fruits/day and non-dates groups. Responders to dates fruits intake as reflected on the Improvement of autism severity based on CARS diagnosis was detected among 78.7 % and 62.9 % based on CARS and DSM5 diagnosis, respectively. Responders had significant improvement in BMI z score and in the ratio levels of both MDA/SOD and MDA/GPX. Conclusion: The positive results of this study suggest that palm dates fruits could be recommended for children with ASD as adjuvant therapy on a daily regular basis to achieve consistent improvement of autism symptoms Objective: Investigate the effectiveness of a 90-day Dates fruits consumption fruits on alleviating autism severity symptoms in individuals with ASD and explore the clinical and laboratory characteristics of the subjects affected their response to dates fruits intake. Methodology: The study was a randomized controlled, double-blind for 3-month. 131 autistic Egyptian children aged 3-12 years were enrolled in one of the three groups; 1st: on 3 dates' fruits/day (47 cases), 2nd: Group II on 5 dates' fruits/day (42 cases), and 3rd: group III; nondates group (42 cases). Conclusion: The positive results of this study suggest that palm dates fruit (a non-pharmacological and risk-free option) could be recommended for children with ASD as adjuvant therapy on a daily regular basis to achieve consistent improvement of autism symptoms.

Keywords : autism spectrum disorders, palm dates fruits, CARS, DSM5, oxidative markers

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