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Nutritional status of children diagnosed with autism spectrum disorder

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Autism spectrum disorder (ASD) is a chronic disease whose symptoms may be present in early childhood development period affecting behavioural, social and language aspects. Also, children with ASD may demonstrate restricted, repetitive or stereotyped behaviour patterns of interests.

In addition to the behavioural aspects of the disease patients diagnosed with ASD may have high sensory sensitivity that can lead to unique nutritional characteristics such as food selectivity resulting in changes in weight and growth patterns and various protocols involving behavioural and social therapy are required.

A cross-sectional study was conducted in the Neurology Centre of Curitiba – Paraná- Brazil, with 34 children in preschool age (2–6 years). Selective behaviour was defined as refusal to eat, reduced number of daily meals, little variability of food in the diet and the record of consumption of a single food three or more times a day. Patients underwent clinical evaluation and were collected three-day food recall, food frequency questionnaire (FFQ) and measures like weight, height, waist circumference and skinfold thickness.

In order to obtain the nutritional diagnosis, the body mass index (BMI) was calculated and subsequently the evaluation of the BMI Z score according to the classification proposed by World Health Organization (WHO).

Regarding the severity of ASD, there was a higher prevalence of mild ($n = 20$) and moderate ($n = 11$) cases and only three children were diagnosed as severe ASD. No statistical difference in nutritional status between children with mild and moderate autism ($p = 0.71$). Three (8.8%) patients had malnutrition, seventeen (50.0%) were eutrophic and fourteen (41.7%) were overweight. When compared sum of skinfolds, triceps and subscapular, the results showed all overweight children with excess fat in these folds ($P < 0.01$). The analysis of three days food recall showed NRI insufficiency of calcium, iron, zinc, folic acid, vitamin A, D, E and nobody reached daily fibre recommendation. In addition, was observed excess intake of energy, carbohydrate, saturated fat and protein. Food frequency questionnaire demonstrated high consumption of processed foods, soft drinks, sweetened and artificial juices and healthy food was below daily recommendation. Only one child showed a selective behaviour pattern in feeding.

Selective behaviour in feeding was not found in this sample possibly due to the lack of ASD severe cases related to high food selectivity in the literature.

Eating behaviour of the children revealed the presence of poor eating habits of children with ASD in early childhood. In conclusion the results found in this study reflects the dietary and nutritional profile of the study population and further research must be carried out to improve the diet of children with ASD and to ensure adequate growth and development in the future.

References

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