

BEHAVIORAL AND EMOTIONAL PROBLEMS IN CHILDREN WITH IDIOPATHIC EPILEPSY AND WELL-CONTROLLED SEIZURES

Submitted by Alexia Prassouli

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INTRODUCTION: Children with epilepsy are at increased risk for developing behavioral and emotional problems.

OBJECTIVE: The aim of this study was to evaluate behavioral and emotional problems in children with idiopathic epilepsy and well-controlled seizures (without seizures for at least 6 months) and to investigate whether specific problems are associated with specific medical epilepsy-related factors.

METHODS: We studied 68 children who had epilepsy and were aged 6.5 to 9.5 years, divided in 2 subgroups: group A, 37 children (18 boys, 19 girls; mean age: 8.29 ± 1.00 years) with idiopathic generalized epilepsy, and group B, 31 children (18 boys, 13 girls; mean age: 8.35 ± 1.12 years) with idiopathic partial epilepsy. The Child Behavior Checklist by Achenbach was used to assess parent-reported behavioral and emotional problems.

RESULTS: A total of 45.9% of children in group A had behavioral and emotional problems, whereas 19.4% of children in group B had behavioral and emotional problems. Male gender was correlated with increased incidence of behavioral problems and the abnormal first electroencephalogram with increased incidence of attention problems in group A, whereas low socioeconomic status was correlated with increased incidence of behavioral problems and male gender with increased incidence of attention problems in group B.

CONCLUSIONS: The results of this study demonstrated a high prevalence of behavioral and emotional problems in children with idiopathic epilepsy. The findings emphasize the necessity to evaluate and address psychosocial problems in children with idiopathic epilepsy, even when their seizures are well controlled.

VISUAL SEARCH ATTENTION AND EXECUTIVE FUNCTION IN CHINESE CHILDREN WITH WILLIAMS SYNDROME

Submitted by Zheng-Yan Zhao

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INTRODUCTION: Williams syndrome (WS) is a rare neurodevelopmental disorder that is caused by a hemizygous deletion on chromosome 7q11.23. The interest of WS to neurocognitive scientists stems from the uneven profiles of cognitive abilities, with spatial cognition seriously impaired and language and face processing relatively proficient. We know relatively little about the visual search attention and executive function in children with WS.

OBJECTIVE: The objective of this study was to examine the nature of visual search attention and executive function in children with WS, compared with children with Down syndrome (DS), healthy chronological age-matched control subjects (CA), and healthy mental age-matched control subjects (MA).

METHODS: A total of 142 children were tested: 21 with WS, 25 with DS, 45 CA, and 41 MA. MA were matched to the children with WS and DS using the Peabody Picture Vocabulary Test. All participants were assessed on a set of computerized visual search tasks and Wilding Monster Sorting Test using a touch-screen.

RESULTS: The results showed that selective attention, switch, and sustained attention of children with WS all are less developed. Children with WS produced a large number of shape errors, and they also confused shape distractors with targets more than the other groups. Children with WS exhibited poorer executive performance as compared with both groups of typical children. They produced more repetitive errors than did children with DS.

CONCLUSIONS: These findings reveal distinct visual search deficits and atypically developing executive function in children with WS.

Obesity/Metabolism

IDENTIFICATION OF THE OBESE CHILD: ADEQUACY OF BODY MASS INDEX AND FAT MASS INDEX FOR CLINICAL PRACTICE AND EPIDEMIOLOGY

Submitted by Nayera Hassan

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INTRODUCTION: There is no agreement among researchers on adiposity indexes and on the best cutoff to define obesity.

OBJECTIVE: The objective of this study was to evaluate the validity of BMI and fat mass index (FMI) as indica-

tors of obesity in 272 boys and 242 girls who were aged 3 to 5 years.

METHODS: Bioelectrical impedance analysis was used to calculate percentage fat mass (%FM) and FMI (fat mass/stature²). Boys and girls were considered obese when %FM was ≥ 25 and ≥ 30 , respectively. Cutoffs of BMI (weight/stature²) and FMI were tested at 90th, 95th, and 97th percentiles.

RESULTS: There were strong, significant correlations between BMI or FMI and %FM, but there was no significant correlation between BMI or FMI and stature; therefore, both BMI and FMI are useful indexes to assess fatness and obesity. With the use of %FM as the criterion for obesity, however, the highest prevalence of obesity was found at the 90th percentile for both genders. BMI and FMI had high specificities and lower but variable sensitivities. FMI is associated with a level of sensitivity that is somewhat higher than that of BMI. Almost all children who were not obese were classified correctly, whereas many obese children were not correctly identified.

CONCLUSIONS: FMI is a specific indicator of childhood obesity, and at 90th percentile, it has moderately high sensitivity. BMI should be used with caution as an indicator of childhood obesity.

COMPARISON OF INTERNATIONAL OBESITY TASKFORCE CUTOFFS, CENTERS FOR DISEASE CONTROL AND PREVENTION GROWTH CHARTS, AND BODY MASS INDEX Z-SCORE VALUES IN THE PREVALENCE OF CHILDHOOD OBESITY: THE GREEK OBESITY AND LIFESTYLE STUDY

Submitted by Nikolaos Mantzouranis

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OBJECTIVE: Few epidemiologic studies have compared classification methods of childhood obesity. The aim of the Greek Obesity and Lifestyle Study (GOALS) was to assess the prevalence of childhood obesity by comparing 3 classification methods.

METHODS: The GOALS was conducted on a representative sample of 2056 students (1148 boys and 908 girls), aged to 13 years. Body mass and height were measured, and the BMI (kg/m²) was calculated. The comparisons of obesity prevalence were based on International Obesity Taskforce (IOTF) cutoffs, Centers for Disease Control and Prevention (CDC) growth charts and BMI-for-age z scores (overweight ≥ 1 SD, obese ≥ 2 SD).

RESULTS: The higher prevalence of obesity (including overweight) in GOALS was found by using the CDC growth charts (37.6%), whereas the obesity prevalence classified according to the IOTF cutoffs was recorded 1%

lower (36.6%). In relation to CDC and IOTF classifications, significant lower prevalence was reported when obesity was estimated as BMI-for-age z scores (15.2%). Adjusted by gender, the Analysis of variance results showed that the obesity prevalence was significantly higher in boys in both CDC and IOTF classifications compared with BMI-for-age z scores.

CONCLUSIONS: The comparison among studies in Greece shows that the prevalence of childhood obesity in GOALS, based on both IOTF and CDC classifications, is the highest ever recorded in Greece and almost similar with the obesity prevalence reported in US teenagers. The lower obesity prevalence recorded in GOALS using the BMI-for-age z scores, compared with IOTF and CDC classifications, did not appropriately specify childhood obesity and cannot be used for public health applications.

ASSOCIATION OF COMORBIDITY WITH OBESITY IN MEXICAN CHILDREN AND ADOLESCENTS

Submitted by Arturo Perea-Martinez

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INTRODUCTION: Obesity is a chronic and recurrent inflammatory disease, associated with high risk to health. It is a world public health problem that affects children and adolescents. It is present in rich and poor countries. Type 2 diabetes, systemic arterial hypertension, blood lipid disorders, and cardiovascular disease together compose the metabolic syndrome (BMI > 95th percentile, weight circumference ≥ 85 th percentile, serum glucose ≥ 100 mg/dL, high-density lipoprotein cholesterol ≤ 40 mg/dL, serum triglycerides ≥ 110 mg/dL); orthopedic lesions and psychosocial problems (marginalization and depression) are present early in life in obese individuals.

OBJECTIVE: The objective of this study was to describe the frequency of comorbidity in a cohort of 185 obese Mexican children and adolescents.

METHODS: A total of 185 obese Mexican children and adolescents were included in the study. The following parameters were measured: BMI, serum lipid profile, serum glucose, alanine aminotransferase, aspartate aminotransferase, alkaline phosphatase, and serum uric acid. Complete physical examinations were performed, including blood pressure measurements.

RESULTS: BMI was at the 95th percentile in 97% of cases; 75% had ≥ 1 clinical indicator of comorbidity associated with obesity. Skin lesions (nigricans acanthosis; folliculitis; and grooves in hip, abdomen, and upper and lower extremities), serum lipid disorders (high level of

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