PREVALENCE OF METABOLIC SYNDROME AMONG OBESE EGYPTIAN SCHOOL STUDENTS

N.E. Hasssan[1], S.A. Elmasry[1], W.A. Fouad[2], L. Sherif[3], A. Elwakkad[4], M. Anwar[4], S.T. Zaki[3]

[1]Biological Anthropology, [2]Community Medicine, [3]Child Health, [4]Medical Biochemistry, National Research Centre, Dokki, Giza, Egypt

Background: Egypt has experienced an increase in the prevalence of childhood overweight/obesity over last decades.

Aim of study was to assess prevalence of metabolic syndrome (MS) and other metabolic features among obese Egyptian school students.

Methods: Study included 462 obese students (body mass index > 95th percentile), 122 prepubertal and 340 pubertal, aged 7 - 18 years. Approved by Ethical Community, National Research Centre. Each subject was submitted to clinical, anthropometric and laboratory assessment. Diagnosis of hypertension, impaired fasting glucose, hyperinsulinieamia, insulin resistance(HOMA-IR), dyslipideamia and MS were defined according to Grundy (2004).

Results: MS was found in 39.7%, with a significantly higher rate among prepubertal (45.5%) than among pubertal students (37%). Prevalence of MS was higher in girls than boys in pubertal age and total sample, while boys have higher prevalence in prepubertal age. Hypertension was significantly more common in pubertal (22.3%) than prepubertal group (14.8%) with obesity. Prevalence of impaired fasting glucose, hyperinsulineamia and HOMA-IR was 20.5, 13.6 and 13.6% among prepubertal and 25.0, 3.3 and 22.8% among pubertal, respectively. Prevalence of fasting hyperinsulinemia in prepubertal was significantly higher than pubertal, while prevalence of impaired fasting glucose and HOMA-IR in pubertal was significantly higher than prepubertal. Overall, dyslipideamia in prepubertal and pubertal was identified in 93.2 and 91.3%, respectively, with significant differences.

Conclusions: MS prevalence among prepubertal is quite higher than pubertal students and in girls more than boys in Egypt, with abnormal lipid profiles, obesity and nutritional mistakes.

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