

Cardiovascular complications of obesity at children in North-Eastern Region of Romania

*Luca A.C., Subotnicu M., Iordache C.
Paediatric Hospital "Sf. Maria" Iasi, University of Medicine and Pharmacy "Gr. T. Popa" Iasi,
ROMANIA*

INTRODUCTION

Obesity is the most prevalent nutritional disorder among children and adolescents. Childhood obesity predisposes to hypertension, insulin resistance and type 2 diabetes, hyperlipidemia, liver and renal disease, and reproductive dysfunction. The purpose of this study is to evaluate the cardiovascular complications of obesity in children and adolescents.

METHODS

Were taken in the study 273 children aged 6-17 years hospitalized for a period of five years (January 2007 – January 2012) in Pediatric Cardiology Department, Children's Emergency Hospital "Sfanta Maria", Iasi, Romania.

They followed the age, sex, body mass index, blood pressure, biological VSR, serum fibrinogen values, total cholesterol and results of echocardiography and ophthalmological examination.

Prospective echocardiographic measurements were performed in 273 obese children. Two-dimensional, M-mode and color M-mode ultrasound, conventional pulse wave Doppler imaging were used to assess cardiac function

RESULTS

The cases of obesity were most common in female subjects (55%), with preponderance in the age range 13-15 years in both sexes. We found increased blood pressure values in 18.85% of cases.

Measurements of LV mass, LV wall thickness and LV end-diastolic diameter and volume were significantly elevated in 34 obese children (12.45% of cases).

Fibrinogen level and total cholesterol elevated recorded average higher among female subjects (54% of cases hypercholesterolemia, that 59% of cases with increased plasma fibrinogen).

CONCLUSION

In this study it was found the occurrence of cardiovascular complications of obesity secondary-school period adolescent.

The echocardiographic exam confirms the elevated LV mass in obese children.

Is necessary to follow the periodic height and weight, as well as evaluating blood pressure, total cholesterol, fibrinogen among children with obesity for preventing cardiovascular complications and framing of these patients in a cardiovascular risk group.