
Snežana Lešović*

CIGOTICA PROGRAMME – PEDIATRIC EXPERIENCES

Introduction

The alarming spread of obesity epidemic in children and adolescents, as well as the absence of tested and efficient measures and programmes on obesity prevention indicate the necessity for the establishment of the Centre for the prevention, treatment and rehabilitation of obesity in children and adolescents and the 'Cigotica Programme' at the Special Hospital 'Zlatibor'. The advantage of the 'Cigotica' Programme is the multidisciplinary approach to treating obese children, which implies specific education, dietetic interventions with the reduction in the total daily calorie intake, physical activity, medical, educational and psychological support, change of behaviour and lifestyle.

Objective

To define obesity complications, metabolic risk factors and treatment effects on body composition and metabolic parameters in adolescents participating in the 'Cigotica' Programme.

Method

1,030 adolescents were examined (498 girls and 532 boys), aged 12 to 18, average age 15.45, diagnosed with primary obesity, hospitalised at the Centre for the prevention, treatment and rehabilitation of obesity in children and adolescents at the Special Hospital 'Zlatibor', in the period from 27/07/2008 to 03/10/2010. Hospitalisation lasted 21 days. Obesity criterion was body mass index (BMI) $> +2$ SD. Body

¹ The Special Hospital for the Thyroid Gland and Metabolism Zlatibor

mass, BMI, % of fat were obtained by means of Tanita scales for determining body composition using the impedance method. Apart from medical examination, blood pressure was also taken. The levels of tryglicerids, total HDL and LDL cholesterols, uric acids and glycemia were determined on the second and twenty-first day of hospitalisation after a 12-day fasting period.

Results

After the multidisciplinary treatment, the average reduction in body mass ($p < 0.05$) in all adolescents was 5.92 ± 2.71 kg, in boys -6.24 ± 3.24 kg, and in girls -5.86 ± 2.4 . During the 21-day hospitalisation, the average BMI ($p < 0.05$) was reduced by -2.12 ± 0.31 in all examinees, in boys by -2.33 ± 48 and in girls by -2.04 ± 0.41 kg/m². The BMI z-score was considerably lower in all examinees upon release and it was ($p < 0.05$) -0.26 ± 0.08 , in girls 0.28 ± 0.06 and in boys 0.31 ± 0.08 . % of fat was considerably lower ($p < 0.05$) in all examinees -1.65 ± 0.23 , in girls 1.72 ± 0.32 and in boys $1.50\% \pm 0.20$. The waist circumference was reduced by -7.85 ± 3.01 in all examinees, in girls -8.20 ± 4.3 and in boys -7.25 ± 2.6 . Hypertension was observed in 28% of adolescents. Two factors of metabolic syndrome were present in 27.6%, and metabolic syndrome was present in 18.3% of the examinees. The disorder in sugar transport was observed in 8.9% of the examinees.

Conclusion

The effects of the 'Cigotica' Programme are very encouraging and they show that the multidisciplinary approach directed towards the reduction in energetic intake, education, change of lifestyle and habits related to nutrition and physical activity, leads to a considerable reduction in body mass, improvement in blood pressure, laboratory analyses, aerobic capacities and self-confidence in obese adolescents. There are obesity complications in a large number of adolescents, which indicates that the obesity problem has not been duly detected by parents or medical workers and that more efficient prevention programmes are needed. A great interest of children, parents, doctors and their participation in the 'Cigotica' Programme are going to contribute to raising awareness of obesity risks and the importance of health prevention in adolescents in our region.

Key words: obesity, adolescents, obesity complications, metabolic syndrome, Cigotica programme