THE IMPORTANCE OF EARLY TREATMENT AND REHABILITATION IN CHILDREN WITH ABDOMINAL OBESITY

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Annotatsiya. *Tadqiqotda abdominal semizlik bilan og‘rigan 12–17 yoshdagi 28 nafar bola tekshirilib, davolash va reabilitatsiya choralari baholangan. Boshlang‘ich tana massa indeksi o‘rtacha 28,1 ± 2,3 kg/m² bo‘lgan. Kuzatuvda bolalarning 33,3 foizida vazn kamayishi qayd etilgan; olti oydan so‘ng ushbu guruhda tana massa indeksi o‘rtacha 2,1 ± 0,9 kg/m² ga pasaygan. Natijalar abdominal semizlikda tizimli va nazorat qilinadigan reabilitatsiyaning metabolik sindrom rivojlanishining oldini olishdagi ahamiyatini ko‘rsatadi.*

Kalit so‘zlar: *abdominal semizlik, bolalar, metabolik sindrom, reabilitatsiya, tana massa indeksi.*

Аннотация. *Обследованы 28 детей 12–17 лет с абдоминальным ожирением; оценены лечебные и реабилитационные мероприятия. Исходный средний индекс массы тела составлял 28,1 ± 2,3 кг/м². Снижение массы тела отмечено у 33,3 % детей; через шесть месяцев в этой группе индекс массы тела уменьшился в среднем на 2,1 ± 0,9 кг/м². Результаты показывают значение систематической контролируемой реабилитации для предупреждения развития метаболического синдрома при абдоминальном ожирении.*

Ключевые слова: *абдоминальное ожирение, дети, метаболический синдром, реабилитация, индекс массы тела.*

Abstract. *Twenty-eight children aged 12–17 years with abdominal obesity were examined to assess treatment and rehabilitation. Their initial mean body mass index was 28.1 ± 2.3 kg/m². Weight reduction was observed in 33.3% of the children; after six months, mean body mass index in this group decreased by 2.1 ± 0.9 kg/m². The findings indicate the value of systematic, monitored rehabilitation in preventing the development of metabolic syndrome in children with abdominal obesity.*

Keywords: *abdominal obesity, children, metabolic syndrome, rehabilitation, body mass index.*

Background. In recent years, pediatricians have increasingly encountered metabolic syndrome (MetS), a condition characterized by a combination of interrelated clinical manifestations. Based on the above, **the aim of the present study** was to conduct a comprehensive examination and implement therapeutic and preventive measures in children with abdominal obesity.

Materials and Methods. Twenty-eight children aged 12–17 years diagnosed with exogenous constitutional obesity were examined. Body weight and body mass index (BMI, Quetelet index) were assessed according to the child's age and sex. The BMI of the examined children ranged from 25 to 32 kg/m², with a mean value of 28.1 ± 2.3 kg/m².

Results. Assessment of arterial blood pressure demonstrated that the mean systolic blood pressure was 118.2 ± 2.75 mmHg, while the mean diastolic blood pressure was 78.2 ± 2.22 mmHg. Blood pressure values in the examined children were found to be close to the upper limit of the normal range. Measurement of blood glucose revealed a mean glycemic level of 4.73 ± 0.15 mmol/L. No cases of hyperglycemia were detected, which was presumably associated with the compensatory effect of hyperinsulinism. Evaluation of lipid metabolism showed that low-density lipoprotein cholesterol (LDL-C) averaged 1.31 ± 0.08 mmol/L, whereas high-density lipoprotein cholesterol (HDL-C) demonstrated the lowest value, averaging 1.16 ± 0.04 mmol/L. Non-pharmacological treatment included maintaining a food diary, strict dietary adherence, therapeutic physical exercise, contrast showers, and physiotherapeutic procedures such as hydromassage. Counseling sessions with parents were considered an essential component of treatment. Among pharmacological interventions, Siofor (metformin) was the preferred medication. Sedative therapy also played an important role, including herbal preparations such as motherwort, valerian, hawthorn, peony, and other medicinal herbs. Follow-up observations demonstrated effective weight reduction in 33.3% of the children. In this group, after six months of treatment and rehabilitation, BMI decreased by an average of 2.1 ± 0.9 kg/m². At the same time, blood pressure also improved: mean systolic blood pressure decreased to 106.4 ± 2.62 mmHg, while mean diastolic blood pressure decreased to 64.1 ± 2.18 mmHg ($p < 0.05$). Low-density lipoprotein cholesterol improved significantly, reaching 1.06 ± 0.03 mmol/L ($p < 0.05$). In contrast, high-density lipoprotein cholesterol increased and approached normal values, averaging 1.38 ± 0.08 mmol/L ($p < 0.05$). For the remaining children, treatment required intensification by adding orlistat, conducting more intensive psychological support with a pediatric psychologist, and prescribing nootropic agents as adjunctive therapy. In cases of elevated arterial blood pressure,

angiotensin-converting enzyme (ACE) inhibitors were prescribed. Adolescents with severe lipid metabolism disorders received statin therapy only after the development of secondary sexual characteristics.

Conclusion. The findings of the present study demonstrate that systematic, comprehensive, and closely monitored treatment and rehabilitation measures in children with abdominal obesity can effectively prevent the development and progression of metabolic syndrome.