МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ
БУКОВИНСЬКИЙ ДЕРЖАВНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ»

М А Т Е Р І А Л И

104-ї підсумкової науково-практичної конференції
з міжнародною участю
професорсько-викладацького персоналу
БУКОВИНСЬКОГО ДЕРЖАВНОГО МЕДИЧНОГО УНІВЕРСИТЕТУ
06, 08, 13 лютого 2023 року

Конференція внесена до Реєстру заходів безперервного професійного розвитку, які проводитимуться у 2023 році №5500074

Чернівці – 2023

Khodzinska Y.Y.

THE INFLUENCE OF CARDIORESPIRATORY FITNESS ON THE TOLERANCE TO PHYSICAL EXERTION OF SCHOOLCHILDREN

Department of Pediatrics, Neonatology and Perinatal Medicine
Bukovinian State Medical University

Introduction. Cardiorespiratory fitness in childhood is a key marker of health. Scientists of the American Heart Association (AHA) consider that the cardiorespiratory fitness (CRF) refers to the capacity of the circulatory and respiratory systems to supply oxygen to skeletal muscle mitochondria for energy production needed during physical activity. The results of a study by Finnish scientists confirm that physical activity is significant for the cardiorespiratory fitness of teenagers. Besides, higher lever of physical activity is more useful for overweight teenagers .

The aim of the study. The purpose of the study was to analyze the effect of cardiorespiratory fitness on the tolerance to physical exertion of schoolchildren.

Materials and methods. Children's physical development was characterized by somatoscopic (research features of the development of the musculoskeletal system, degree of fatness, physique, posture, etc.) and anthropometric indicators (body weight, height, chest circumference, waist circumference, hip circumference). Physical activity was researched by using the questionnaire, for assessment the tolerance to physical exertion we used the heart rate, the arterial blood pressure, the inspiratory breath-hold test. Statistical analysis conducted with the program Statistica 12.0.

Results. The object of research was 103 children from 7 to 12 years old. The average age of all examined children was 9.87±0.14 years (with a range from 7 to 12 years), that is a prepubertal age. By gender, there were 50 boys (49.6%) and 53 girls (51.4%). The main group of 70 examined children, the average age was 9.7±0.17 years, who studied according to a school program with health-preserving technologies and in the control group - 10.06±0.04 years ($p>0.05$) schoolchildren with a standard study program. The children of the main group at rest had better indicators of the cardiorespiratory system: heart rate 83.8±0.87 beats/min (in the control group – 88.8±2.03 beats/min), systolic blood pressure – 88.5± . 33.3±3.89″ (in the control group - 30.6±1.45″), blood oxygen saturation by pulse oximetry (respectively) - 98.8±0.03% and 97.3±0.32%.

Conclusion. To conclude, low physical activity was accompanied by a decrease in tolerance to physical exertion in children with different levels of physical development.Physical activity should be encouraged in children at cardiovascular risk to prevent further decline in cardiorespiratory fitness and the development of other comorbidities. Sufficient physical activity supports satisfactory parameters of adaptation capabilities of childs organism.

Kuryk O.V.

CLINICAL AND PARACLINICAL CRITERIA OF DIGESTIVE SYSTEM DYSFUNCTION IN NEWBORNS WITH PERINATAL PATHOLOGY

Department of Pediatrics, Neonatology and Perinatal Pathology
Bukovinian State Medical University

Introduction. Visceral hypoperfusion is accompanied by activation of indigenous microflora that damages the intestinal barrier of the newborn. The loss of the intestinal barrier can lead to a syndrome of systemic inflammatory response, individual organ damage and multiple organ failure due to the resorption of endotoxins and other substances.

The aim of the study. Determination of clinical and paraclinical manifestations of functional disorders of the digestive system in newborns with perinatal pathology.

Materials and methods. The study included 132 full-term newborns, who were divided into: the main group - 82 infants with severe forms of perinatal pathology, in which severe forms of gastrointestinal dysfunction were noted, including in the complex of multiple organ failure; the comparison group consisted of 50 healthy newborns.

Results. According to the survey data in newborns, the most severe cases of perinatal pathology were due to such conditions as: respiratory distress syndrome - 95.12% (required

artificial ventilation - 82.93% newborns), perinatal CNS lesion - 82.93%, multiple organ failure - 28, 05%, meconium aspiration syndrome - 45.12%, seizure syndrome - 19.51%, brain edema - 19.51%, asphyxia of severe degree - 10.98% and moderate degree - 20.73%. Clinically, combined disorders of the digestive system in newborns of the group with severe perinatal pathology were characterized by: decreased food tolerance - 86.59%, regurgitation/stasis - 80.49%, paresis/weak intestinal peristalsis - 57.32%, suppression - 16.44% and absence of sucking reflex - 3.66% of neonates. Paraclinically in the experimental compared with the control group, there was a significant decrease in red blood parameters - Er - 5.024±0.336 and 5.60±0.06, $p<0.05$; Hb - 183.061±11. 37 and 194.102.88, $p<0.05$; decreased platelet count, 203.04±18.55 and 239.9±10.09, $p<0.05$; white blood cell count, 19.014±1.99 and 10.25±0.55, $p<0.05$; eosinophils were significantly lower, 1.92±0.27 and 2.700.27, $p<0.05$; segmented leukocytes, 52.07±3.36 and 62.301.00 monocytes, 2.02±0.23 and 2.600.24, $p<0.05$; lymphocyte count tended to decrease, 24.79±2.34 and 25.001.00, $p>0.05$; stab neutrophils were significantly more prevalent in the experimental group, 19.19±1.75 and 10.25±0.55, $p<0.05$. Total protein was decreased in comparison with control - 57,25±4,93 and 59,83±2,59, $p<0,05$; high indices of total bilirubin (mainly due to indirect fraction) were explained by the presence of neonatal hemolytic disease - 71,399±68,675 and 33,9±2,16, $p<0,05$; elevated ALAT, 20.4041.860 and 16.31.89, $p<0.05$; AsAT, 51.300±4.903 and 30.11.89, $p<0.05$; urea was higher in the main group, 3.57±0.33 and 3.20.16, $p<0.05$; blood glucose levels were lower in the experimental group compared to control, 3.563±0.386 and 3.80.27, $p<0.05$.

Conclusions. Involvement of the digestive system in the pathological process is a logical outcome of severe hypoxic damage of the body. The causes of dysfunction of the digestive system are complex disorders of hemodynamics, including regional, with decreased blood flow in the mesenteric arteries, endothelial changes in the first minutes of life after birth. Disruption of systemic and peripheral circulation, lack of absorption and delivery of oxygen to the tissues, accompanying perinatal asphyxia, develop a number of pathophysiological and pathochemical cascades, leading to secondary damage to the gastrointestinal tract.

Kovtyuk N.I.

PHYSICAL AND MENTAL FUNCTIONING IN CHILDREN WITH PRIMARY HEADACHE

Department of Pediatrics, Neonatology and Perinatal Medicine
Bukovinian State Medical University

Introduction. Headache disorders are one of the most common and disabling pain conditions in children. Frequent headache in children was associated with negative psychosocial impact such as school absence, higher levels of emotional problems, in particular anxiety and depression, as well as other somatic complaints and lower levels of quality of life (QoL).

The aim of the study. The goal of prospective study was to establish influence of primary headache on children's health-related quality of life.

Materials and methods. We examined 98 children (age 10-17 years). All participants were assessed using validated instruments for measuring physical (physical health summery - PHS) and mental (mental health summery - MHS) functioning. We used generic questionnaire of QoL with Children Form health surveys (CF). We were carried out the medical examination, questionnaire with refinement social, anamnesis, and other features. We were looking on a direction, force and significance of correlation.

Results. Quality of life is recognized as an important outcome of children health. The main parts of QoL estimation include physical and mental functioning summary and overall quality of life summary. The difference in MHS between healthy (77.8±13.0) and PHA (73.1±11.9) children was significant ($p<0.05$). The biggest difference between healthy (84.6±12.9) and headache (76.7±14.1, $p<0.05$) children was seen in PHS. We found out some difference in gender depending child self-report. The girl's data comparing with boy's had wider range (76.2 vs 61.4) and general higher assessment (77.4 vs 76.1) of their physical functioning index. Children with headache reported a worse overall index of QoL (QLS) (73.9±9.4) as compared to age-related healthy