

decrease of antioxidant defense. The deficiency of zinc, which is part of more than 200 metalloenzymes of the body, has been found in 50.58 ± 3.81 % of patients. Lower levels of chromium, the main functions of which is to ensure the transport of glucose through cell membranes, participation in the synthesis of lecithin, cholesterol, fatty acids, detoxification of the body, building muscle bulk and muscle strength, has been found in 69.77 ± 3.50 % of patients. We have found reduced levels of manganese, which is essential for the formation of connective tissue, activation of mitochondria, ensuring higher levels of ascorbic acid in the body, in 50.0 ± 3.81 % of patients. The deficiency of such a macro-element as magnesium, which actively participates in the synthesis and maturation of collagen, has been found in the majority of patients 80.81 ± 3.0 %.

Therefore, as a result of studying the elemental status of children with chronic constipation caused by the congenital elongation of the sigmoid colon, it has been established that the deficiency of magnesium, chromium and selenium leads to the progression of the pathological process and acceleration of decompensation development, which can be used as a prognostic index – a marker of elemental deficiency. In the event of selenium and zinc deficiency, we can observe the development of non-specific non-ulcerative colitis in children with chronic constipation. The level of selenium in blood can be used as an informative indicator of adaptive abilities of the body and the decrease of the compensatory ability, i.e as a so-called mineral predictor.

Therefore, a comprehensive assessment of functional disorders of the bowels allows having an in-depth understanding of the condition of the large intestine: motor-evacuation disorders; trophic base, infrastructure, quality and quantity composition of the microflora, its metabolic activity; epithelial energy supply; factors of specific and non-specific defense of the body. The data received help determine the mechanisms of functional and organic pathology formation in the bowels against the background of the congenital elongation of the sigmoid colon, which in turn will allow working out a protocol of choosing an adequate, comprehensive, conservative therapy.

So, a decrease in the levels of collagen-specific bioelements of magnesium, chromium, manganese, selenium and zinc is typical for all the children with chronic constipation caused by dolichosigmoid. Dependence has been established between the specifics of the clinical course of chronic constipation and the elemental status, which will allow implementing individual approach to the choice of pharmaceuticals and nutraceuticals for the correction of diselementosis.

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THE ASSOCIATION BETWEEN PEDIATRIC TYPE 1 DIABETES MELLITUS AND COVID-19

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COVID-19 outbreak modified type 1 diabetes management both in adults and children. The pediatric population is affected by COVID-19 in a milder manner, but the possibility of SARS-CoV-2 acting as a trigger for the autoimmune destruction of the beta-cells and leading to an increase in the incidence of type 1 diabetes is still unknown.

The aim of the study was to assess the possible impact of the COVID-19 pandemic in the pediatric population with diabetes mellitus and its association with new cases due to the literature review. Material and methods: Web of Science search for medical publications was performed in English for 2019-21; the search terms that were used included “COVID-19” and “diabetes mellitus”, 67 publications were obtained, only every third publication was included in the study.

Due to recent reports, the association between type 1 diabetes mellitus and increased morbidity and mortality rates during COVID-19 infection in adults was demonstrated. New-onset cases of diabetes mellitus and severe metabolic complications of preexisting diabetes, including diabetic ketoacidosis and hyperosmolarity have been observed in both adult and pediatric patients with COVID-19. SARS-CoV-2 can trigger severe diabetic ketoacidosis at presentation in individuals with new-onset diabetes. However, there is no hard evidence that SARS-CoV-2 induces type 1 diabetes mellitus on its own accord. Children and adolescents with diabetes mellitus are strongly encouraged to adhere to preventive and protective measures against the viral spread, if

hospitalization is needed, the health care team should be aware so as to modulate management, particularly in children with type 1 diabetes mellitus and hypoglycemia. The current recommended drugs for the treatment of severe COVID-19, dexamethasone, and remdesivir, may cause hyperglycemia, an adverse effect that doctors should keep in mind when caring for patients with diabetes mellitus and COVID-19. Adverse impact on glycaemic control and lifestyle was seen mostly in some groups of pediatric patients (pubertal adolescent boys), while other researchers have shown that glycemic control during the coronavirus lockdown can be adequately achieved and be comparable to the pre-lockdown period in children with type 1 diabetes mellitus. In an Indian study, no strong evidence to suggest higher mortality rates in children with type 1 diabetes mellitus in comparison with their healthy peers was shown but poor outcomes and more deaths were recorded in diabetic adults after the second wave of COVID-19 infection. However British researchers have shown that the direct comparison of longitudinal data from before and during the first COVID-19 wave clearly demonstrated the increased severity of presentation of newly diagnosed type 1 diabetes in children in the context of high circulating COVID-19 cases in the community. This may be indirectly due to the delayed presentation or directly due to the emerging complex relationship between SARS-CoV-2 infection and glucose metabolism or diabetes pathogenesis. There are few reports presenting patients with multisystem inflammatory syndrome in children (MIS-C) associated with COVID-19 and new onset diabetes. Pediatric outcomes and prognosis in case of COVID-19 and diabetes mellitus association seem to be similar to their non-diabetic-peers and consistently milder than adults with diabetes. Patients with diabetes mellitus are at a high risk of poor prognosis with COVID-19 and vaccination should be prioritized for them.

New-onset diabetes and severe metabolic diabetic complications have been observed in children during the COVID-19 pandemic.

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**PECULIARITIES OF BRONCHIAL ASTHMA COURSE DEPENDING ON THE
FUNCTION OF THE PARATHYROID GLANDS IN PATIENTS WITH VARIOUS
AMOUNT OF BASIC THERAPY BY MEANS OF INHALATION
GLUCOCORTICOSTEROIDS**

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Bronchial asthma (BA) remains the most widely spread disease of the respiratory system in spite of other diseases modern medicine deals with, and it can deteriorate the quality of life of patients. A leading role in the treatment of the disease belongs to inhalation glucocorticosteroids (iGCS), though the issue of their safe administration still remains important.

Objective of our research was to study peculiarities of bronchial asthma course depending on the function of the parathyroid glands in patients with various amount of basic therapy including iGCS. 72 children suffering from persisting bronchial asthma (pBA) were examined comprehensively on the base of Chernivtsi Regional Children's Clinical Hospital. An average concentration of the parathyroid hormone (PTH) in the blood serum of children was $22,68 \pm 5,58$ pg/ml, which was within the normal limits (according to the producer's figures the norm is 10,4-66,5 pg/ml). Meanwhile, distribution of the indices obtained enabled to determine that 32,2% of patients had zero value, 20,0% of them did not reach the lower limit of the norm, 8,9% - had indices higher than that of the upper limit, and only 38,9% were within the normal range. PTH concentration in the blood serum of patients with uncontrolled pBA was found to differ reliably ($11,08 \pm 4,5$ pg/ml) from that of the patients with a controlled course of the disease – $51,5 \pm 3,5$ pg/ml ($P < 0,05$), which was indicative of an inconsiderable tendency (within the normal values) to decrease the function of the parathyroid glands with an uncontrolled course of BA.

Considering this tendency, two groups of comparison were formed for the study of peculiarities of persisting BA in patients depending on parathyroid hormone concentration in the blood serum. group included 32 patients with PTH concentration in the blood serum higher than 10,0 pg/ml, and – 40 children suffering from pBA with lower values indicative of the parathyroid