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PREVALENCE, CLINICAL FEATURES, AND PROGNOSIS OF THE PSYCHOSOMATIC PATHOLOGY IN CHILDREN WITH PSYCHOPHYSICAL DEVELOPMENTAL DISORDERS

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The article presents the results of the clinical and epidemiological study on the prevalence of psychosomatic pathology (PSP) in Ukraine in children with psychophysical developmental disorders (PPDD). It was found that the prevalence of PSP in children with PPDD did not significantly differ from that in patients without PPDD and was estimated 89 and 86 children per 1000 of child population, respectively. The predominant psychosomatic diseases in children with and without PPDD were bronchial asthma (BA) and duodenal ulcer (DU). In patients with PPDD, the highest prevalence of duodenal ulcer (56%), and bronchial asthma (26%) was observed, while on the contrary in children without PPDD the prevalence of duodenal ulcer was estimated 12% and of bronchial asthma 68%. In children with PSP and PPDD, earlier onset of duodenal ulcer was revealed, as compared to children without PPDD (10.5±0.7 years and 14.2±0.5, respectively). Clinical features of the course of duodenal ulcer in children without PPDD were the prevalence of minor and asymptomatic forms (29.0%) with detection of the first clinical signs of the disease in the form of complications (gastrointestinal bleeding, scar-and-ulcer deformity of duodenum) (8.1%). The same pattern was observed in children with PPDD, however, the frequency of complications in them was significantly higher (14.7%) with longer duration (73.0%) and severity (53.8%) of the disease, as compared to 46.6% and 16.7% in patients without PPDD. Pivotal complex psychological markers of the development of PSP in children with and without PPDD were high levels of personal and reactive anxiety, emotional lability and deviation from autogenous norm, low indicators of self-esteem and poor performance, which required differentiated medical and psychological support.

Key words: psychosomatic pathology, psychophysical disorders, children, adolescents, risk factors.

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The problem of psychosomatic pathology (PSP) in a broad sense is the problem of human existence [1, 2, 4]. In particular, psychosomatic diseases are so-called adaptation diseases that combine somatic and psychological aspects [4, 6]. Traditionally, PSP include hypertension (BH), bronchial asthma (BA), ulcerative colitis (UC), diabetes mellitus (DM), rheumatoid arthritis (RA), gastric (GU) and duodenal ulcers (DU), diseases that have a progressive course, greatly deteriorating the quality of human life [1, 2, 5, 6-8]. Psycho-somatic relationship is one of the most complex issues of modern medicine and psychology, despite the fact that close connection between the mental and the somatic components has been established a long time ago and has been studied since the days of Hippocrates, Plato and Aristotle. In the process of the development of medicine, the issues of the psyche influence on the course of somatic disease was almost not considered. However, nowadays, at a time of rapid increase in information flow, with significant reduction in motor activity and global impact of adverse environmental factors, it becomes relevant to consider issues of mental and physical health in unity – that is, in a frame of psychosomatics [2, 3, 4, 6].

PSP, as a general pathological process, is characterized by the following features: it is developed only in humans, since psyche acts as a significant component of objective impairment of life; it is characterized by a non-stereotypical response to an action of causally significant factors and differs in the absence of genetically determined unified protective adaptive mechanisms [3].

Thus, it is obvious that there are two main components that play leading role in the emergence of PSP: a psychotraumatic factor and a state of a subject, influenced by it. In this case, the deciding aspect is the behavioral pattern of personality in various adverse situations. Therefore, in presence of a high level of creativity, a person is much more likely to be identified in interaction with the world and social environment. That is why orientation of patient to his creative implementation is of a great importance in the prevention and treatment of PSP.

In this respect, a special place was given to children with disorders of psychophysical development (PPDD), since the prevalence, peculiarities of clinical manifestations of PSP, and risk factors of their formation

have not been investigated in these children so far. Recent studies have shown that developmental disorder is a universal form of reaction of the organism to any negative impact not only biological but also unfavorable sociopsychological factors.

There are many different terms that have been used in the domestic literature for defining the violations of development in children: "developmental abnormalities", "children with special needs", "children with special educational needs", "children with peculiarities of psychophysical development (PPD)", etc. All of these concepts reflect various aspects of the manifestations of disturbed development, but their most common features are characterized by the term "disontogenesis", proposed by E. Schwalbe in 1927. At present, under this concept are understood different forms of disorders of ontogenesis, especially the nervous system (NS), which cover the period of early childhood (up to 3 years), when morphological systems of an organism have not yet reached maturity.

Nervous system disorders are usually caused by biological and social factors that can act separately and in combination, predominantly during the period of intense cellular differentiation of the brain structures, that is, at the early stages of embryogenesis.

It is known that the development of a child with violations of the PPD has a number of its own laws. The complexity of the structure of abnormal development is determined by the presence of the primary defect caused by the biological factor and secondary disorders that arise in the process of further abnormal development. The farther in time, the root causes (the primary defect of biological origin) and the secondary symptom (violation in the development of mental processes) are "separated" among themselves, the more opportunities are opened for correction and compensation of the latter with the help of a rational system of medical and psychological influences, education and upbringing. However, data on the prevalence, structure, peculiarities of the clinical course and risk factors for the formation of PSP in children with PPDD were not found in available literature [1].

The purpose of the study was to investigate the prevalence, peculiarities of the clinical manifestations, risk factors for the emergence and progression of the psychosomatic pathology in children and adolescents with and without psychophysical disorders.

Materials and methods. 209 children aged between 7 and 17 years old with PSP were examined, among them 111 were without PPDD (Group I) and 98 with PPDD (Group II). Diagnosis was verified according to ICD-10. The study of the prevalence of PSP in children and adolescents with and without psychophysiological disorders was performed using the cohort-epidemiological method.

The socio-demographic method was used to analyze the factors that influenced the formation of PSP. By questioning in accordance to the questionnaire developed by us, we collected information about a child himself, his family, living conditions, state of health, hereditary burden, bad habits, the presence of conflict and other psychogenic situations, and the success and nature of interpersonal relationships. Clinical-psychological method was used to study the psychopathological characteristics of children and adolescents with PSP. The research was carried out using the following methods: the level of anxiety as a constitutional feature of a patient or as a consequence of a person's illness / reaction to stress was determined using the Ch. D. Spielberger-Yu.L.Khanin (1978) scale of personal and reactive anxiety; the method of R. Cattell allowed to identify peculiarities of the individual in terms of his integrity; to determine the general psychoemotional state of children, the invented by us "method of diagnosing persistent stereotypes of psychoemotional response of children and adolescents" was used, the priority of which was confirmed by the patent of Ukraine to utility model No. 22346, 22347 dated September 25, 2009. Comprehensive neurophysiological diagnostics was carried out using topographic mapping of the spectral power of the main rhythms of electroencephalogram (EEG) with its spectral analysis. Instrumental methods of investigation included ultrasound of the organs of the abdominal cavity, thyroid gland, kidneys, fibroezofagogastroduodenoscopy (FEGDS), if necessary, sight biopsy with further histological examination of biopsy specimens, intragastric pH-metry, and spirometry. General clinical, biochemical, immunoenzymatic examinations for verifying diagnoses according to ICD-10 were conducted as well.

Statistical processing of the obtained data was performed using mathematical statistical method on PC using SPSS and Excel software from the Microsoft Office 2003, STATISTIKA 8.0, and EPIINFO 5.0 packages. During the formation of representative samples, a STATCALC program from the EPIINFO package, V.5.0, was used to calculate the sufficient number of examined individuals.

Results of the study and their discussion. The performed study permitted to reveal the prevalence of PSP among children with and without PPDD, as well as to identify the main risk factors for the formation and progression of PSP. The prevalence of PSP among children with PPDD was: bronchial asthma (68%), duodenal ulcer (12%), diabetes mellitus (5%), rheumatoid arthritis (4%) and total PSP (89%). The

prevalence of PSP among children without PPDD was: duodenal ulcer (56%), bronchial asthma (26%), ulcerative colitis (3%), diabetes mellitus (1%) and total PSP (86%).

As it can be seen from the data, the prevalence of PSP among children with and without PPDD did not have significant differences and was 86% and 89%, respectively ($p>0.05$). In the PSP structure in both groups the most significant nosologies were BA and DU. Particularly, in children without PPDD, the prevalence of bronchial asthma (68%) was significantly higher than that of duodenal ulcer (12%) ($p<0.001$), which, according to F. Alexander (2002), was considered "the queen of psychosomatics". On the contrary, in children with PPDD statistically significant prevalence of duodenal ulcer (56%) as compared to bronchial asthma (26%) was observed ($p<0.001$).

Correlation of girls and boys in the 1st and 2nd groups was 1:1. The vast majority of patients in both groups (62.2% and 73.0% respectively) were between 11 and 17 years old. Probably, this is because in most sick children, the onset of disease occurs at the junior school age (7-10 years), and it usually takes 2-4 years for the formation of chronic pathology. At the same time, the risk of chronic disease increases significantly in the pre- and puberty period, which is explained by the peculiarities of functioning of a child's organism during these periods. Heterochronous formation of regulation processes of various physiological functions determine so-called critical periods of a child's organism development, which are basic for increased sensitivity to environmental influences and the development of desynchronization- one of the first nonspecific manifestations of many pathological conditions. Distribution of risk factors (FR) in the examined patients is presented in table 1.

Table 1

Prognostic table of risk assessment for the formation of psychosomatic pathology in children with psychophysical defects

Risk factors and anti-risk factors	DK	J
Risk factors		
Conflicts in family (between parents)	10.48	2.45
Bad or missing search activity	9.48	2.45
Malnutrition	8.34	1.42
Conflicts in family (children-parents)	8.23	1.33
Alexithymia	7.24	1.12
Low social status of parents	3.77	0.68
Head and spine injuries in anamnesis	3.67	0.57
Meteosensitivity	3.46	0.51
Death of parents	2.28	0.41
Incomplete family	2.25	0.39
Pathology of childbirth	2.24	1.23
Not participating in creative circles	2.23	0.36
Not engaged in sports activities	2.03	0.34
Presence of chronic somatic diseases in family	1.86	0.32
Presence of birth defects in family	1.82	0.31
Mother's disease during pregnancy	1.76	0.28
Poor progress at school	1.66	0.28
Conflicts at school	1.56	0.22
Perinatal lesion of central nervous system	1.54	0.17
Frequent acute respiratory infections (ARIs) in medical history	1.12	0.02
Accidents and catastrophes in anamnesis	1.12	0.02
One in family	1.11	0.01
No risk		
Harmonious relationships in family	-5.95	0.95
Search activity (creativity)	-4.68	0.64
Rational nutrition	-3.66	0.54
Full family	-3.54	0.45
Satisfactory parents' social status	-1.08	0.24
Classes in creative circles	-0.98	0.19
Absence of hereditary diseases	-0.89	0.18

Analysis of risk factors (RF) affecting the formation of PSP, considering their versatility and multifactoriality, substantiates a need of identification of their statistically significant combinations. This will allow to predict further course of a disease on its early stages.

When conducting cohort-epidemiological analysis, data on the presence / absence of pathological symptoms for comparative analysis with assessment of the frequency of signs and calculation of the values

of diagnostic coefficients and measures of informativeness were digitized. Numerical expression of symptoms was carried out through calculations of the integral index of intensity of symptoms, depending on the degree of their severity and frequency of occurrence. For each child, a questionnaire with a list of different RFs was completed. These questionnaires were summarized in a protocol. The conducted comprehensive research made it possible to create a prognostic table (table 1) for assessing risks of developing PSP in children. In this table, all statistically significant factors were arranged and located in order of decreasing of the modules of their diagnostic coefficients (that is, in order of decreasing their "predictive power"). Risk assessment using the developed tables was carried out by using the Wald's sequential procedure (modified by E. Gubler) [3].

The essence of this procedure was that the diagnostic coefficients (DK) of the characteristics of each person were added to each other until the recommended level of reliability of the forecast was achieved. For example, reliability of the forecast at the level $p < 0.05$ corresponds to the value of the sum of the diagnostic coefficients $\sum_{DK} > 13$, at the level of $p < 0.01$ – $\sum_{DK} > 20$, and at the level $p < 0.001$ – $\sum_{DK} > 30$. Thus, it becomes clear that none of the established RFs is self-sufficient for a probable forecast (for all the factors presented in the table $DK < 13$), and therefore a plausible forecast is possible only in case of their cumulative use.

In this study, seven anti-risk factors for the formation of PSPs were also identified. Their significance varies from a small (absence of hereditary diseases - $DK = -0.89$ at $J = 0.18$) to moderate (harmonic relationships in family - $DK = -5.95$ at $J = 0.92$). Nevertheless, anti-risk factors listed in table. 2 together provide reliability of the prediction of no risk of the PSP formation at the level of $p < 0.01$, since in this combination of factors the module $\sum_{DK} = -20.77$, that is, more than 20 – is the limit value for this level of reliability. Clinical and paraclinical features of PSP in children with and without PPDD were determined, and the main clinical and pathological tendencies in their psychological and neurophysiological status, which can be diagnosed in the early stages of the formation of the disease were estimated (table 2 and table 3).

Clinical picture of PSP in children with and without PPDD was characterized by polymorphism of complaints and clinical syndromes. In patients with duodenal ulcer abdominal pain (93.8% and 91.7%), dyspeptic (65.2% and 58.4%) and chronic intoxication syndrome (38.8% and 38.7%, respectively) were found and were not significantly different in both groups ($p > 0.05$).

Table 2

Distribution of patients by duration of PAP (n = 194)

Groups of children	Nosological form	Duration of the disease, years			Total
		1-2 years	< 5 years	> 5 years	
		abs. n. (%)	abs. n. (%)	abs. n. (%)	abs. n. (%)
I group (n = 93)	bronchial asthma	4(4.3)	16(17.2)	10(10.7)	30(32.5)
	peptic ulcer disease	21(22.6)	23(24.7)	19(20.4)	63(67.5)*
	Total	25(26.9)	39(41.9)^	29(31.1)+	93(100.0)
II group (n = 101)	bronchial asthma	45(44.6)	23(22.8)	16(15.8)*	84(83.2).*
	peptic ulcer disease	9(8.8)	7(7.1)	1(0.9)	17(16.8)
	Total	54(53.4)#	30(29.9)	17(16.7)	101(100.0)

Note: * - the difference is significant ($p < 0.05$) between patients with asthma and BH of the duodenum; # -between PSP duration 1-2 years; ^ - up to 5 years; + - more than 5 years.

Table 3

Distribution of patients with severity of PSP (n = 194)

Groups of children	Nosological form	Severity of the disease			Total
		Light	moderate	severe	
		abs. n.(%)	abs. n.(%)	abs. n.(%)	abs. n.(%)
I group (n = 93)	bronchial asthma	2(6.7)*	10(33.3)*	18(60.0)*	30(100.0)
	duodenal ulcer	8(12.7)*	23(36.5)*	32(50.8)*	63(100.0)
	Total	10(10.8)*	33(35.4)	50(53.8)*	93(100.0)
II group (n = 101)	bronchial asthma	45(44.6)	23(22.8)	16(15.8)	84(100.0)
	duodenal ulcer	9(8.8)	7(7.1)	1(0.9)	17(16.8)
	Total	54(53.4)	30(29.9)	17(16.7)	101(100.0)

Note: * - the difference is significant ($p < 0.05$) between the 1st and 2nd groups

Regarding the asthenoneurotic syndrome, it was significantly more prevalent in children with PSP and PPDD (95.9% and 52.1%) ($p < 0.001$). The same tendency was observed among children with bronchial asthma. In children without psychophysical developmental disorders (group II), short duration of disease (1-2 years) was observed in more than half of cases (53.4%), up to 5 years - in 29.9%, more than 5 years - in 16.7%. On the other hand, in patients with PPDD (Group I), a significant increase in the duration of disease was found, that is: duration of 1-2 years - only in 26.9% of patients, up to 5 years - 41.9% and more than 5 years 31.1% of children ($p < 0.05$).

In the age structure of PSP in children with PPDD a significantly earlier onset of duodenal ulcer was found in comparison to children without psychophysical developmental defects (10.5 ± 0.7 and 14.2 ± 0.5 years old, respectively ($p < 0.05$)). Also, more severe course of PSP was detected in the vast majority (53.8%) of patients with PPDD vs. 16.7% in children without PPDD ($p < 0.001$) (Table 6). Psychological markers for the formation of PSP in children with PPDD are given in table 4.

Table 4

Prognostic table of risk markers - absence of risk of formation of psychosomatic pathology (psychological study)

Test	Feature	Range of feature	DK	J
Risk markers				
Test of Spielberger-Khanin	high personal anxiety	> 50 points	4.53	0.21
		46-50 points	7.84	0.13
	high reactive anxiety	> 45 points	2.33	0.07
		36-45 points	7.30	0.21
Method of R. Cattell	low self-esteem	≤ 3.0 points	0.57	0.01
		3.1-5.0 points	7.34	0.45
	low emotional constancy	≤ 3.0 points	0.68	0.14
		3.1-5.0 points	6.70	1.38
	high anxiety	6.0-7.0 points	1.95	0.12
		8.0-9.0 points	7.35	0.31
projective test "good" and "evil" with a choice of color	Poor performance	30-45 points	7.40	0.23
	Poor performance	46-50 points	2.84	0.18
	deviation from autogenous N	30-45 points	4.71	0.27
	deviation from autogenous N	46-50 points	6.30	0.11
risk-free markers				
Test of Spielberger-Khanin	low personal anxiety	< 36 points	-1.68	0.27
		36-40 points	-4.38	0.42
	Low reactive anxiety	< 26 points	-0.73	0.07
		26-30 points	-3.71	0.47
Method of R. Cattell	High self-esteem	> 7.0 points	-0.57	0.01
		6.0-7.0 points	-7.91	0.46
	high emotional constancy	> 7.0 points	-0.68	0.05
		6.0-7.0 points	-1.02	0.02
Projective test	High performance	≥ 50-60 points	-1.07	0.16

Determination of a psychological status can be considered as an integral component of a child's health, since the problems that we were planning to identify in the process of diagnosis were entirely focused on personal level. Apart from the objective situation of each person (life circumstances, the real state of health), it was essential to determine their subjective attitude to this situation, as well as to assess their own reactions to life difficulties, individual resources of resistance and development. It is known that lack of protection mechanisms complicates the processes of recognition and expression of emotions, reduces the child's ability to psychologically transform stress, reduces the possibility of managing intense negative experiences. The latter usually serve as a basis for further formation of various psychosomatic disorders, which can be considered as a separate personal way of responding [4].

Analysis of the data of psychological research allowed to establish 7 markers of susceptibility to PSP, namely: high levels of personal and reactive anxiety (according to the Spielberger-Khanin test), low self-esteem and high indices of anxiety and emotional lability (by R. Cattell's test), poor performance and high rates of deviation from the autogenous norm (according to the projective test "good" and "evil" with the choice of color).

As can be seen from Table. 4, some of the established markers, such as high personal and reactive anxiety according to the Spielberger-Khanin test, and poor performance and deviation from the autogenous norm according to the projective test "good" and "evil" with choice of color are self-sufficient for the probable risk assessment or absence of risk because their DK is high enough but lower than the threshold number of 13, which ensures the accuracy of the diagnostic conclusion at the level of $p < 0.05$. Therefore, they provide the necessary reliability of diagnostic findings only when combined with others.

Conclusions

1. The prevalence of PSP in children with PPDD was not significantly different from that in patients without PPDD and was estimated 89 and 86 per 1.000 children, respectively.

2. In the structure of PSP in children with and without PPDD two nosological forms – bronchial asthma and duodenal ulcer were predominant. However, in patients with PPDD, the most prevalent were duodenal ulcer, found at 56% of cases, bronchial asthma – 26%, and diabetes mellitus and ulcerative colitis – 1% and 3%, respectively. In the absence of PPDD, a reverse trend was observed – bronchial asthma was observed in 68% of cases, duodenal ulcer in 12%, diabetes mellitus in 5% and rheumatoid arthritis in 4% patients.

3. In the age structure of children with PSP and PPDD a significantly earlier onset of duodenal ulcer disease was observed as compared to children without psychophysical developmental defects (10.5±0.7 years and 14.2±0.5, respectively).

4. Clinical peculiarities of duodenal ulcer disease in 29.0% of children without PPDD were light and asymptomatic clinical forms and detection of the first clinical signs of the disease in the form of complications (gastro-intestinal bleeding, scar-and-ulcer deformation of the duodenal mucosa) (8.1%). The same pattern has been observed in children with PPDD. However, in them the frequency of detection of complicated forms of the disease was significantly higher (14.7%).

5. The peculiarities of the clinical course of PSP in children with PPDD were their longer duration (73.0%) and severity (53.8%) vs. 46.6% and 16.7% in patients without PPDD.

6. Pivotal complex psychological markers for the development of PSP in children with and without PPDD were high levels of personal and reactive anxiety, emotional lability and deviation from autogenous norm, low self-esteem and poor performance indicators, which required differentiated medical and psychological support.

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Реферат

РОЗПОВСЮДЖЕНІСТЬ, КЛІНІЧНІ ОСОБЛИВОСТІ ТА ПРОГНОЗУВАННЯ ПЕРЕБІГУ ПСИХОСОМАТИЧНОЇ ПАТОЛОГІЇ У ДІТЕЙ З ПОРУШЕННЯМИ ПСИХОФІЗИЧНОГО РОЗВИТКУ

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У статті представлені результати клінічного та епідеміологічного дослідження щодо поширеності психосоматичної патології (ПСП) в Україні у дітей з порушеннями психофізичного розвитку (ППФР). Було встановлено, що поширеність ПСП у дітей з ППФР суттєво не відрізняється від долі пацієнтів без ППФР і оцінювались відповідно 89 та 86 дітей на 1000 дитячого населення. Переважаючими психосоматичними захворюваннями у дітей з та без ППФР були бронхіальна астма (БА) та виразка дванадцятипалої кишки (ВДК). У пацієнтів з ППФР спостерігалася найвища поширеність виразки дванадцятипалої кишки (56%) та бронхіальної астми (26%), тоді як, навпаки, у дітей без ППФР поширеність виразки дванадцятипалої кишки оцінювали 12%, а бронхіальної астми - 68%. У дітей із ПСП та ППФР виявлено раніше виникнення виразки дванадцятипалої кишки порівняно з дітьми без ППФР (10,5 ± 0,7 років та 14,2 ± 0,5 відповідно). Клінічними особливостями перебігу виразки дванадцятипалої

РАСПРОСТРАНЕННОСТЬ, КЛИНИЧЕСКИЕ ОСОБЕННОСТИ И ПРОГНОЗИРОВАНИЕ ТЕЧЕНИЯ ПСИХОСОМАТИЧЕСКОЙ ПАТОЛОГИИ У ДЕТЕЙ С НАРУШЕНИЯМИ ПСИХОФИЗИЧЕСКОГО РАЗВИТИЯ

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В статье представлены результаты клинико-эпидемиологического исследования распространенности психосоматической патологии (ПСП) в Украине у детей с психофизическими нарушениями развития (ПФНР). Было установлено, что распространенность ПСП у детей с ПФНР существенно не отличалась от таковой у пациентов без ПФНР и составила 89 и 86 детей на 1000 детей, соответственно. Преобладающими психосоматическими заболеваниями у детей с и без ПФНР были бронхиальная астма (БА) и язва двенадцатиперстной кишки (ЯДК). У пациентов с ПФНР наблюдалась наибольшая распространенность язвенной болезни двенадцатиперстной кишки (56%) и бронхиальной астмы (26%), в то время как у детей без ПФНР распространенность язвенной болезни двенадцатиперстной кишки оценивалась в 12% и бронхиальной астмы 68%. У детей с ПСП и ПФНР было выявлено более раннее начало язвенной болезни двенадцатиперстной кишки по сравнению с детьми без ПФНР (10,5±0,7 года и 14,2±0,5 соответственно). Клиническими признаками течения язвенной болезни

кишки у дітей без ППФР були поширеність незначних та безсимптомних форм (29,0%) з виявленням перших клінічних ознак захворювання у вигляді ускладнень (шлунково-кишкова кровотеча, рубцево-виразкова деформація дванадцятипалої кишки) (8,1%). Така ж картина спостерігалася і у дітей з ППФР, проте частота ускладнень у них була значно вищою (14,7%) при більшій тривалості (73,0%) та тяжкості (53,8%) захворювання порівняно з 46,6% та 16,7% у пацієнтів без ППФР. Основними комплексними психологічними маркерами розвитку ПСП у дітей з та без ППФР були високий рівень особистісної та реактивної тривожності, емоційна лабільність та відхилення від аутогенної норми, низькі показники самооцінки та низька працездатність, що вимагало диференційованої медико-психологічної підтримки.

Ключові слова: психосоматична патологія, психофізичні розлади, діти, підлітки, фактори ризику.

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дванадцятиперстної кишки у дітей без ПФНР являлись розпространеність малих і бессимптомних форм (29,0%) з виявленням перших клінічних ознак захворювання в формі ускладнень (желудочно-кишкові кровотечі, рубцево-язвенна деформація дванадцятиперстної кишки) (8,1%). Така ж картина спостерігалася у дітей з ПФНР, однак частота ускладнень у них була достовірно вище (14,7%) при більшій тривалості (73,0%) та тяжкості (53,8%) захворювання порівняно з 46,6% та 16,7% у пацієнтів без ПФНР. Ключевим комплексом психологічних маркерів розвитку ПСП у дітей з і без ПФНР являлись високий рівень особистісної та реактивної тривоги, емоційна лабільність та відхилення від аутогенної норми, низькі показники самооцінки та низька працездатність, що вимагало диференційованої медико-психологічної підтримки.

Ключевые слова: психосоматическая патология, психофизические расстройства, дети, подростки, факторы риска.

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TREATMENT OF ARTERIAL HYPERTENSION IN YOUNG MALES WITH CLINICAL SIGNS OF AUTONOMIC DYSFUNCTION

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The aim of the study was to improve the effectiveness of the treatment of arterial hypertension (AH) in young patients with clinical signs of autonomic dysfunction. We examined 65 male patients with AH (mean age 35.6 ± 4.3 years) and clinical signs of autonomic dysfunction. Basic therapy was administered to 30 of them (group 1), and ethylmethylhydroxypyridine succinate (EMS) was additionally administered to 35 patients (group 2) for 4 weeks. After treatment, BP correction to target values was achieved in 76.7% of the patients in group 1 and in 88.6% in group 2. On the background of therapy with EMS, a more pronounced increase in total HRV, decreased activity of the sympathetic division of the autonomic nervous system and restoration of the vegetative balance according to the temporal HRV indicators, as well as the significant positive changes in state and trait anxiety were observed. Thus, the inclusion of EMS in the complex treatment of young males with AH and clinical signs of autonomic dysfunction has a positive effect on clinical symptoms, contributes to the restoration of the autonomic balance and correction of psycho-emotional state.

Key words: arterial hypertension in young, autonomic dysfunction, heart rate variability, anxiety, ethylmethylhydroxypyridine succinate.

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Hypertension is one of the major health maintenance problems due to the high prevalence of AH and the fact that this condition is one of the main risk factors for cardiovascular diseases and their complications, disability and mortality [10]. Vegetative dysfunction is the most widespread and unpredictable disorder of the young by the variety of its manifestations and results [8]. In the early stages of the AH development in case of absence of complaints from patients, an imbalance in the system of autonomic regulation of cardiac rhythm already appears [4], and in case of a pronounced clinical picture of AH, it is possible to prevent the most frequent complications arising from the traumas of target organs by means of the evaluation of the autonomic status. Clinicians face the difficult task of choice of the optimal therapy in each case, based not only on the BP indicators, but also on the nature of the functioning of the nervous system, which is directly related to the regulation of blood circulation.

Ethylmethylhydroxypyridine succinate (EMS) is an antioxidant drug with a wide spectrum of clinical activity, induced by its polyvalent mechanism of action: antioxidant (inhibits the processes of free radical oxidation, lipid peroxidation, activates superoxide dismutase what leads to an increase of the activity of the physiological antioxidant system as a whole); anxiolytic (due to modeling effect on GABA-receptor complex), antihypoxic (intrinsic antioxidant properties provided by the influence on endogenic respiration of mitochondria and activation of succinate oxidation pathway contributes to an increase of the