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Current problems of nutrition in children with organic diseases of the central nervous system and possible solutions

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ABSTRACT. Introduction. The nutritional status of children with cerebral palsy has been described repeatedly, while children with severe organic damage to the central nervous system have similar changes. **The aim** – to determine the frequency of nutritional deficiency and possible ways of correction in children, pupils of the mercy department of the orphanage for the disabled. **Materials and methods.** The design of a single-center retrospective cohort study assessed the physical development and nutritional status of 113 mercy ward students with severe organic damage to the central nervous system from 4 to 18 years of age. **Results.** The study included equal proportions of children with cerebral palsy (n=38) and spastic tetraparesis (n=39). The study involved children fed through a gastrostomy tube, 33 of whom had cerebral palsy and three with organic central nervous system damage. Most children included in the study (n=56; 49.5%) had spastic tetraparesis, GMFCS level 5 of motor activity. According to the GMFCS scale, level 4 was diagnosed in 3 people (2.5%), and 1 child each with mobility at the GMFCS 2 and GMFCS 3 levels. Other variants of cerebral palsy included paraplegia and hemiplegia, ataxic-hyperkinetic and mixed variants. Children with cerebral palsy also had pronounced motor impairments. A third of the entire sample of children (n=36) had severe malnutrition, another third had mild and moderate severe malnutrition (n=37), satisfactory nutritional status was diagnosed in 35 children, obesity in 5. Growth retardation of varying degrees of severity was noted in 17 children. **Conclusions.** There is a cohort of children who, due to severe organic disorders, have significant, difficult-to-correct nutritional deficiencies. Nutrition for children with severe neurological pathology requires the work of a multidisciplinary team of highly qualified specialists (pediatrician, nutritionist, gastroenterologist, speech therapist, pulmonologist, clinical pharmacologist, kinesiologist, and occupational therapist).

KEYWORDS: children, organic damage to the central nervous system, nutritional status, enteral nutrition, gastrostomy

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Актуальные проблемы питания детей с органическим поражением центральной нервной системы и возможные пути решения

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РЕЗЮМЕ. Введение. Статус питания детей с детским церебральным параличом описан неоднократно, при этом дети с тяжелым органическим поражением центральной нервной системы имеют схожие изменения. **Цель** – определить частоту развития нутритивного дефицита и возможные пути его коррекции у детей – воспитанников отделения милосердия детского дома-интерната инвалидов. **Материалы и методы.** В дизайне одноцентрового ретроспективного когортного исследования оценено физическое развитие и нутритивный статус 113 воспитанников отделения милосердия с тяжелыми проявлениями органического поражения центральной нервной системы от 4 до 18 лет, преобладали дети подросткового и юношеского возраста. **Результаты.** В исследовании в равных долях присутствовали дети с органическим поражением центральной нервной системы (n=38) и детским церебральным параличом (n=39). В исследовании приняли участие дети, питающиеся через гастростому, из которых 33 имели детский церебральный паралич, а трое – органическое поражение центральной нервной системы. Большинство (n=56; 49,5%) характеризовались спастическим тетрапарезом с уровнем мобильности GMFCS 5, у троих (2,5%) отмечен уровень GMFCS 4, и по одному ребенку – с уровнями GMFCS 2 и GMFCS 3. Среди других вариантов детского церебрального паралича отмечены пара- и гемиплегии, атаксически-гиперкинетические и смешанные варианты. Дети с органическим поражением центральной нервной системы также имели выраженные двигательные нарушения. Треть всей выборки детей (n=36) имели тяжелую белково-энергетическую недостаточность, другая треть – легкую и умеренную белково-энергетическую недостаточность (n=37), удовлетворительный нутритивный статус диагностирован у 35 детей, ожирение у 5. Задержка роста разной степени выраженности отмечена у 17 детей. **Выводы.** Существует когорта детей, которые в силу своих тяжелых органических нарушений имеют значительные, трудно поддающиеся коррекции нарушения питания. Питание детей с тяжелой неврологической патологией требует работы мультидисциплинарной команды специалистов высокой квалификации (педиатр, диетолог, гастроэнтеролог, логопед, пульмонолог, клинический фармаколог, кинезиолог, эрготерапевт).

КЛЮЧЕВЫЕ СЛОВА: дети, органическое поражение центральной нервной системы, нутритивный статус, энтеральное питание, гастростома

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INTRODUCTION

Organic central nervous system disorders (OCNSD) is a collective term that encompasses a group of conditions, the most common of which are cerebral palsy (CP), congenital malformations (hydrocephalus, *spina bifida*, genetic abnormalities), and the consequences of perinatal hypoxia (congenital infections, toxic and mechanical factors, severe neonatal jaundice) [1–5]. In the current International Classification of Diseases (ICD-10), the term “organic lesion of the central nervous system” is coded under F06–F09 “Mental disorders due to brain injury or somatic disease,” as well as G90–G99 “Other disorders of the nervous system.” In clinical practice, specific diagnoses are used (e.g., “consequences of perinatal hypoxic-ischemic CNS damage,” “symptomatic epilepsy,” etc.). Statistical data worldwide are collected according to specific nosologies. Thus, the prevalence of cerebral palsy in developed countries and the Russian Federation (RF) is 2–3.5 per 1,000 live births [1–7].

In developed countries and the Russian Federation, the incidence of severe central nervous system (CNS) disorders has remained relatively stable over the past 20–30 years. The incidence of birth defects is declining due to preventive measures (folic acid supplementation, improved perinatal and neonatal screening). At the same time, with improved survival rates among extremely preterm infants, some of them develop CNS malformations due to genetic abnormalities or other perinatal causes [2, 7, 8]. According to Rosstat data, as of 2023, approximately 15,000–18,000 children with intellectual disabilities—most often severe or profound — reside in residential care facilities within the Russian Federation’s social protection system; these disabilities are primarily caused by organic damage to the central nervous system¹. Dysphagia² [9, 10], motor impairments [1, 10–12], an inability to communicate [12], and dependence on external care [13] create conditions conducive to the development of malnutrition [14–16].

¹ Rosstat. Residential care institutions for children with disabilities [website]. Available from: <https://www.rosstat.gov.ru/> (accessed: 15 Dec 2025).

² Common Gastrointestinal Problems in Children with Neurological Impairments (NI): Evaluation, Treatment and Monitoring. URL: http://odgru.ru/images/Common_Gastrointestinal_Problems_in_Children_with_Neurological_Impairments_NI_ESP-GHAN_Advice_Guide._2019.pdf (accessed: 15.12.2025).

The prevalence of nutritional deficiencies among children with severe neurological disorders ranges from 30% to 70%, depending on the child’s age, the specific condition, and its severity, and represents a central challenge in the management of such patients³ [10, 12, 14]. Scientific data clearly indicate that protein-energy malnutrition is a significant independent factor that shortens the life expectancy of children with severe neurological disorders [17–21].

AIM

To determine the prevalence of nutritional deficiencies and possible ways to address them among children in the special care unit of a residential care home for children with disabilities.

MATERIALS AND METHODS

This single-center retrospective cohort study evaluated the physical development and nutritional status of 119 children aged 4 to 18 years with severe manifestations of cerebral palsy who were residents of a special care facility.

Somatometric measurements (height, weight) of low-mobility patients with pronounced body deformities, intellectual disability, and severe behavioral disorders sometimes present certain difficulties and can significantly distort the actual picture [22–28]. For children with severe motor impairments, a segmental method of measuring height based on lower leg length was used (Table 1) [26, 27, 29].

Estimated height was calculated using the provided formulas based on age, and during puberty, based on sex. Measurement errors could reach 1.5 cm [27, 29].

The children’s body weight was measured using electronic floor scales, which were calibrated before each measurement. Children who were unable to stand were weighed using the tare method [27, 29] while held by staff, with the weight of the person weighing them subtracted. The frequency of measurements varied depending on the feeding method: once every 3 months for orally fed children; once a month for children receiving tube feeding and gastrostomy feeding; once a week or more frequently in cases of weight loss.

³ Ibid.

Table 1. Formulas for calculating body length by shin length in patients with limited mobility [27, 29]

Таблица 1. Формулы расчета длины тела по длине голени у маломобильных пациентов [27, 29]

Возраст Age	Формула Formula
До 12 лет Up to 12 years old	Рост (см) = $(3,26 \cdot \text{ДГ (см)} + 30,8$ Height (cm) = $(3.26 \cdot \text{SL (cm)} + 30.8$
Мальчики, старше 12 лет Boys over 12 years old	Рост (см) = $64,19 - 0,04 \cdot \text{Возраст (годы)} + 2,2 \cdot \text{ДГ (см)}$ Height (cm) = $64.19 - 0.04 \cdot \text{Age (years)} + 2.2 \cdot \text{SL (cm)}$
Девочки, старше 12 лет Girls over 12 years old	Рост (см) = $84,88 - 0,24 \cdot \text{Возраст (годы)} + 1,83 \cdot \text{ДГ (см)}$ Height (cm) = $84.88 - 0.24 \cdot \text{Age (years)} + 1.83 \cdot \text{SL (cm)}$

Note: SL – shin length.

Примечание: ДГ – длина голени.

Дата 08.04.24
ФИО _____
Вес/рост _____
Возраст _____
Диета 18 2009

Оцените по шкале следующее:

Тошнота 0 1 2 3 4 5 6 7 8 9 10 Боль 0 1 2 3 4 5 6 7 8 9 10
Аппетит 0 1 2 3 4 5 6 7 8 9 10 Настроение 0 1 2 3 4 5 6 7 8 9 10

Оценочная шкала

0 2 4 6 8 10

Рвота _____, частота рвоты _____, стул _____
цвет, консистенция _____, кратность _____

Отметьте, какой объем питания удалось съесть сегодня

0% 25% 50% 75% 100%

Завтрак / первое блюдо	
Завтрак / второе блюдо	
Второй завтрак	
Обед / первое блюдо	
Обед / второе блюдо	
Ужин	
Ужин	
Перед сном	

Дополнительные приемы пищи _____

Fig. 1. Nutrition diary filled out by the nursing staff (figure provided by the author)

Рис. 1. Дневник питания, заполненный средним медицинским персоналом (рисунок предоставлен автором)

To assess the children's physical development, Z-scores were used with software recommended by the World Health Organization (WHO): WHO Antro (for children aged 0 to 5 years) and WHO Antro Plus (for children over 5 years of age),

as well as a modified version of its mobile app, AntroCalc [27]. For children with cerebral palsy, in accordance with WHO recommendations, special percentile curves were used to assess height, age, and body mass index (BMI), depending on the

degree of gross motor impairment, gender, and feeding method [27]. In our study, percentile values were converted to Z-scores according to the conversion table [27].

Meal provisions for children residing in social care facilities for people with disabilities are regulated by St. Petersburg Government Resolution No. 1284 of December 29, 2014, "On the Approval of Nutritional Standards in Social Service Organizations in St. Petersburg" (as amended on July 18, 2025)¹. For patients requiring additional therapeutic nutrition, the amount of food consumed was assessed by nursing staff using a specialized food diary (Fig. 1), which was filled out daily. Subsequently, dietary analysis was conducted by a physician with a parallel assessment of nutritional status. The results of the two-week dietary log made it possible to identify children who regularly did not finish the offered portion of food, as well as children with dysphagia, and to determine its severity. Children who were fed orally, most often with pureed food, over a prolonged period and whose feeding did not meet physiological norms – as confirmed by low physical development indicators – became candidates for the introduction of supplemental therapeutic nutrition [28–30].

The diagnosis of malnutrition and its severity were determined in accordance with WHO recommendations [26].

Permission to conduct the study was obtained from the independent ethics committee of the St. Petersburg State Pediatric Medical University of Ministry of Health of Russia.

Statistical analysis of the results was performed using Microsoft Excel (Microsoft 365 version, 2025–2026) with descriptive statistical methods and nonparametric methods.

RESULTS

The study included equal numbers of orally fed children with OCNSD (n=41) and cerebral palsy (n=37). The group of children fed via gastrostomy was combined: it consisted primarily of children with cerebral palsy (n=38) and three

children with OCNSD. The age distribution is presented in Table 2. Adolescents predominate in the groups.

Among patients with OCNSD, the majority of children have a history of hypoxic-ischemic CNS damage.

The following neurological disorders are included in the spectrum of this condition:

- moderate to severe intellectual disability, with or without behavioral disturbances;
- chromosomal disorders, such as Down syndrome, Pierre Robin syndrome, and Franceschetti syndrome;
- structural and symptomatic epilepsy, including drug-resistant epilepsy;
- Duchenne muscular dystrophy;
- an atypical form of adrenoleukodystrophy (inherited peroxisomal disorders);
- malformations of the brain and spinal cord.

Most of the children included in the study had spastic tetraparesis (n=654; 54.6%) and a GMFCS Level 5 motor activity score (n=68; 57.1%). According to the GMFCS scale, 6 (5.0%) patients were diagnosed with Level 4, 4 (3.4%) with Level 3 mobility, 2 (1.7%) with Level 2, and 40 (33.6%) with Level 1 or no motor impairments. Among other variants of cerebral palsy: ataxic-hyperkinetic (n=7; 5.9%), atonic-asthenic (n=2; 1.7%), and mixed variants (n=2; 1.7%). It should be noted that children with CNS disorders also had pronounced motor impairments.

Since 2019, patients with severe CNS damage who have reached the age of 18 have been transferred to psychoneurological residential facilities until they reach the age of 24^{2, 3}. The longer stay of patients over the age of 18 in residential care facilities for people with disabilities is due to their physical and mental development, as well as significant limitations in their self-care skills. It should be noted that the latest WHO consensus documents

¹ Resolution of the Government of St. Petersburg of December 29, 2014 No. 1284 "On Approval of Nutritional Standards in Social Service Organizations of St. Petersburg" (as amended on July 18, 2025). URL: <https://docs.cntd.ru/document/822404350> (accessed: 12.12.2025).

² Ministry of Labour and Social Protection of the Russian Federation. Order No. 305n of 14 May 2025 "On Approval of the Rules for Organizing the Activities of Social Service Organizations and Their Structural Units" [Internet]. Available from: <https://legalacts.ru/doc/postanovlenie-mintruda-rf-ot-08082002-n-54/> (accessed: 15 Dec 2025).

³ Ministry of Labour and Social Development of the Russian Federation. Resolution No. 54 of 8 August 2002 "On Approval of Methodological Recommendations for the Organization of Activities of State (Municipal) Residential Institutions for Children with Intellectual Disabilities" [Internet]. Available from: <https://normativ.kontur.ru/document?moduleId=1&documentId=500399> (accessed: 15.12.2025).

Table 2. Age composition of groups

Таблица 2. Возрастной состав групп

Признак Sign	Группа Group			Различия между группами Statistics
	№ 1 ОПЦНС OLCNS	№ 2 ДЦП CP	№ 3 ГСТ GST	
Первое детство First childhood n=13 (10,9%)	1 (2,4%)	3 (8,1%)	9 (22,0%)	0,013 P ₁₋₃ =0,021
Второе детство Second childhood n=39 (32,8%)	7 (17,1%)	13 (35,1%)	19 (46,3%)	0,017 P ₁₋₃ =0,025
Подростковый возраст Adolescence n=10 (8,4%)	3 (7,3%)	4 (10,8%)	3 (7,3%)	0,820
Юношеский возраст Youth age n=57 (47,9%)	30 (73,3%)	17 (45,9%)	10 (24,4%)	<0,001 P ₁₋₃ <0,001
Итого Total n=119 (100%)	41 (34,5%)	37 (31%)	41 (34,5%)	119 (100%)

The table is prepared by the authors using their own data

Таблица составлена авторами по собственным данным

Note: GST – gastrostomy; CP – cerebral palsy; OLCNS – organic lesion of the central nervous system.

Примечание: ГСТ – гастростома; ДЦП – детский церебральный паралич; ОПЦНС – органическое поражение центральной нервной системы.

Table 3. Structure of physical development and nutritional status of pupils of the nursing department

Таблица 3. Структура физического развития и нутритивного статуса воспитанников отделения милосердия

Нутритивный статус Nutritional status	Периоды детства Childhood periods				Всего Total n=119 (100%)
	первое детство first childhood n=13 (10,9%)	второе детство second childhood n=39 (32,8%)	подростковый возраст adolescence n=10 (8,4%)	юношеский возраст youth age n=57 (47,9%)	
Удовлетворительный Normal	7 (53,8%)	16 (41,0%)	3 (30,0%)	16 (28,0%)	42 (35,3%)
Легкая недостаточность питания Mild malnutrition	3 (23%)	7 (17,9%)	2 (20,0%)	12 (21,0%)	24 (20,2%)
Умеренная недостаточность питания Moderate malnutrition	1 (7,7%)	10 (25,6%)	1 (10,0%)	8 (14,0%)	20 (16,8%)
Тяжелая недостаточность питания Severe malnutrition	2 (15,4%)	4 (10,3%)	4 (40,0%)	20 (35%)	30 (25,2%)
Избыточная масса тела Overweight	0	0	0	0	0
Ожирение Obesity	0	2 (5,1%)	0	1 (1,75%)	3 (2,5%)
Задержка роста Stunting	2 (1,8%)	1 (0,9%)	0	1 (0,9%)	4 (3,4%)
Выраженная задержка роста Growth retardation	0	2 (1,8%)	3 (2,6%)	8 (7,1%)	13 (10,9%)

The table is prepared by the authors using their own data

Таблица составлена авторами по собственным данным

on age categories define adolescence as extending up to age 25¹ [26, 27].

Deviations in physical development and nutritional status among children with CNS disorders are presented in Table 3. It should be noted that 35 (31%) children were diagnosed with average physical development and satisfactory nutritional status.

Among the study cohort, normal nutritional status was determined in 42 (35.3%) children. In percentage terms, children in the younger age group predominated (53.8%), while the lowest number of children without nutritional disorders was among adolescents (28%). Severe protein-energy malnutrition was diagnosed in 30 (25.2%) children, primarily among adolescents (n=4, 40%) and young adults (n=20, 35%). Obesity was observed in 5 patients from different age groups. Growth retardation was observed in every age group. Severe growth retardation was also characteristic of young adult residents – 8 (7.1%).

Motor impairments worsened the nutritional status of the children. In most cases, normal nutritional status was observed in children with minimal motor impairments (n=23; 53.7%). Severe motor impairments were mostly associated with severe malnutrition (n=27; 39.7%). Obesity was more common in the group of children with severe cerebral palsy (n=4; 5.9%) (Fig. 2).

Depending on the feeding method, the subjects were distributed as follows: 43 (36.1%) children characterized by limited mobility and severe dysphagia were fed via gastrostomy; 35 (29.4%) children with moderate and mild dysphagia received pureed food from the family table; 47 (39.5%) patients were fed according to age-appropriate standards. Among the children receiving feeding via a gastrostomy, 12 had a tracheostomy, and one child was on continuous mechanical ventilation. The feeding rate was determined by the child's physiological capabilities. However, frequent rumination, hyperkinesis, convulsive syndrome, maintenance of pathological muscle tone, and the tendency of children with severe neurological pathology to induce vomiting on their own led to severe nutritional deficiency.

Methods for correcting nutritional status disorders in neurological patients are currently not standardized, and there are no clinical guidelines

for the nutrition of children with central nervous system disorders. At the same time, studying the nutritional status of children with central nervous system disorders and developing a general algorithm for its assessment and correction will improve the quality of life for these patients.

Choosing a feeding method. For children with no safety or efficacy restrictions regarding food intake, the diet was selected based on the presence of comorbid conditions. A standard diet was defined as one balanced in terms of caloric content and macronutrients – proteins, fats, and carbohydrates – in accordance with age-specific guidelines for residents of care facilities for people with disabilities² [31]. A general pureed diet was prescribed for children with an intact swallowing reflex but clear signs of dysphagia, rated at 2–3 on the EDACS scale. In cases of childhood obesity, restrictions on simple carbohydrates and fats were prescribed, along with an increase in fiber intake. In cases of low weight gain or nutritional deficiency, the possibility of supplemental feeding with a therapeutic formula was considered, either orally, via a feeding tube, or by adding it to foods (porridge, cottage cheese, yogurt) [32–34].

Meal frequency and portion size. Portion sizes and meal frequency are established in accordance with St. Petersburg Government Resolution No. 1284 of December 29, 2014, "On the Approval of Nutritional Standards in Social Service Organizations of St. Petersburg," which regulates the daily food intake for orphaned children in residential social service facilities³. Children who could feed themselves were fed 5 times a day; those fed via gastrostomy were fed 6 times a day; in cases of diagnosed nutritional deficiency, tube feeding was added to the 5-meal regimen [27, 33, 34].

Methods of feeding children with severe dysphagia. In children with severe impairments in the effectiveness and safety of oral feeding (EDACS IV–V), tube feeding was initiated. If the need for tube feeding persisted for more than a month, a gastrostomy was performed [10, 27, 34]. Balloon "tailed" gastrostomies were most commonly used for children with severe

¹ The WHO Child Growth Standards. URL: <https://www.who.int/tools/child-growth-standards> (accessed: 15.12.2025).

² Resolution of the Government of St. Petersburg of December 29, 2014 No. 1284 "On approval of nutrition standards in social service organizations of St. Petersburg" (as amended on July 18, 2025). URL: <https://docs.cntd.ru/document/822404350> (accessed: 12.12.2025).

³ Ibid.

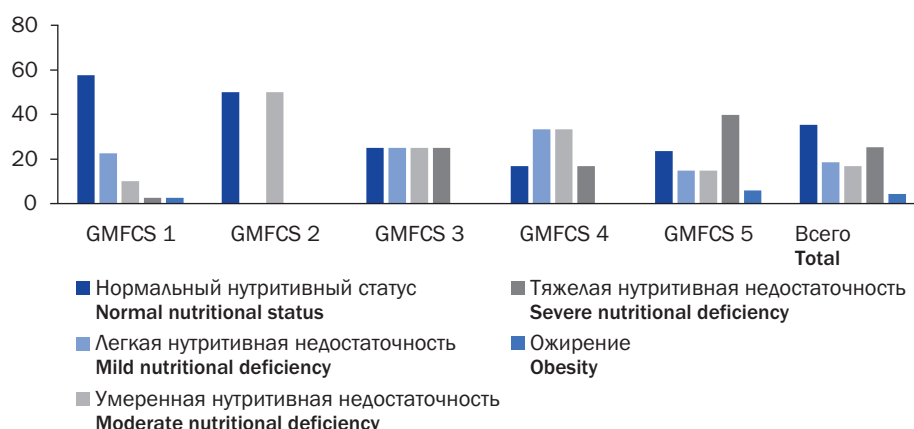


Fig. 2. Nutritional Status Characteristics Relative to the Degree of Gross Motor Function Impairment (the figure is prepared by the author using their own data)

Рис. 2. Характеристика нутритивного статуса в зависимости от степени нарушения больших моторных функций (рисунок подготовлен автором по собственным данным)

multiple impairments [34–36]. The more physiological bolus method of feeding formula was used most frequently. In cases of vomiting and regurgitation caused by frequent concomitant gastroesophageal reflux (GER), we switched to enteral drip feeding [36–39].

Nutritional guidelines for children with feeding tubes. Patients with stomas or feeding tubes were fed six times a day; between feedings, the children were given water. In cases of illness, GERD exacerbations, frequent regurgitation, or weight loss, we switched to frequent, small feedings, reducing the volume of formula per feeding and increasing the frequency of feedings while maintaining the daily volume and caloric intake. If frequent, small feedings were ineffective, we resorted to drip feeding. Difficulties with drip feeding may be due to the need for the patient to remain immobile; therefore, such feeding was performed more often at night¹ [29, 33, 34, 36]. The calculation of the volume of therapeutic formula provided in inpatient social care facilities is governed by St. Petersburg Government Resolution No.1284² of December 29, 2014, and was conducted taking individual characteristics into account.

¹ Dietetic Management of Children with Neurological Impairments (NI). URL: http://odgru.ru/images/Dietetic_Management_of_Children_with_Neurological_Impairments_NI_ESPGHAN_Advice_Guide_2019.pdf (accessed: 15.12.2025).

² Government of Saint Petersburg. Resolution No. 1284 of 29 December 2014 "On Approval of Nutrition Standards in Social Service Organizations of Saint Petersburg" (as amended on 18 July 2025) [Internet]. Available from: <https://docs.cntd.ru/document/822404350> (accessed: 12.12.2025).

DISCUSSION

There is evidence of differences in physical development [10, 12–16, 25], nutritional status [10, 16, 22–24, 28], and body composition in children with OCNSD [10, 13, 22, 28] compared to neurotypical children. Measurements of basic indicators of physical development (height and body weight) in children with limited mobility differ from those in typically developing children [12, 15, 29]. Methods for assessing physical development and nutritional status also differ [10, 12, 14, 15]. The WHO website provides charts and tables for assessing physical development and nutritional status in children with cerebral palsy based on motor activity levels on the scale GMFCS³ [26, 27] and certain genetic syndromes (trisomy 21, Noonan syndrome)⁴. Previous studies on the nutritional status of children with cerebral palsy have shown that children with minimal motor impairments may be classified as typically developing according to AntroCalc, whereas children with limited mobility, when classified as typically developing, will exhibit significant nutritional deficiencies and severe growth retardation [12, 14, 23, 25]. Given the high prevalence of nutritional disorders in children with CP [12, 14, 23, 25] and OCNSD, the correction of malnutrition in this patient population is a critically important component of therapy, directly affecting prognosis and life expectancy [19, 20].

³ Growth Charts for Cerebral Palsy» Life Expectancy. Project. URL: <https://www.lifeexpectancy.org/articles/GrowthCharts.shtml> (accessed: 12.12.2025).

⁴ The WHO Child Growth Standards. URL: <https://www.who.int/tools/child-growth-standards> (accessed: 15.12.2025).

In Russia, there are no clinical guidelines for the nutrition of children with severe organic CNS disorders and cerebral palsy. Based on the regulatory framework and available scientific literature, the Miloserdie Department has developed a standardized algorithm for diagnosing malnutrition and selecting individualized nutrition plans for the facility's residents. There is a cohort of children who, due to their severe organic disorders, have significant nutritional disorders that are difficult to correct.

CONCLUSION

One-third of the residents (n=42; 35.3%) at the social care facility had a satisfactory nutritional status. Severe malnutrition was diagnosed in 30 (25.2%) residents, primarily among adolescents (n=4; 40%) and young adults (n=20; 35%). One-third of the residents with severe swallowing disorders – dysphagia – require additional feeding devices (gastrostomies). Feeding via gastrostomy is most commonly provided to children in late childhood (n=19; 46.3%), early childhood (n=9; 22%), and adolescence (n=10; 24.4%).

Feeding children with severe neurological disorders requires the work of a multidisciplinary team of highly qualified specialists (pediatrician, dietitian, gastroenterologist, speech therapist, pulmonologist, clinical pharmacologist, kinesiologist, occupational therapist). Providing ade-

quate nutrition and treatment for children with neurological disorders entails very high financial costs. The organization of nutrition for children in social care facilities requires improvements to the regulatory framework, development of clinical guidelines, and further scientific research.

ADDITIONAL INFORMATION

The author read and approved the final version before publication.

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Consent for publication. The author obtained written consent from the patients' legal representatives for the publication of medical data.

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