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PRE-NOSOLOGICAL DIAGNOSIS OF PEDIATRIC PATHOLOGY WITH THE USE OF AUTOMATED DISPENSARY EXAMINATION COMPLEXES

ABSTRACT

The article discusses the results of the use of ACDE (Automated complex of dispensary examinations) in the regions of the Republic of Sakha (Yakutia). In the course of the work, the main organizational approaches were identified in the study of the health status of children, and the most advantageous use of automated complexes of dispensary examinations in the Republic of Sakha (Yakutia) was identified to improve the quality of preventive examinations.

Key words: children, ACDE, preventive examinations.

Introduction. We have analyzed the statistical data of the general morbidity of the child population of the RS (Y) over the past 10 years. It was revealed that over the past 10 years there has been an increase in the incidence of children in almost all classes of diseases.

In practical pediatrics, the early intervention strategy is much more effective. It is based on the earliest possible recognition of deviations from normal development or the onset of disease and timely correction of the environment and the conditions that caused them. Screening tests and systems targeting different types of pathology help detect children at risk of developing a disease. The best results are demonstrated by universal systems designed for multidisciplinary screening. Such systems, in particular, include the complex «ACDE», which has become widespread in the pediatric service of Russia [1]. ACDE is an automated complex of dispensary examination of children and adolescents. It was developed in 1991. Scientific Research and Design and Technological Institute of Biotechnical Systems of the Ministry of Education and Science of the Russian Federation in conjunction with specialists from the St. Petersburg State Pediatric Medical Academy. The ACDE system issues a decision about the presence of a pathology or the degree of its probability and focuses on the tactics of further monitoring and counseling of the child. Calculation of the pathology spectrum is provided in the following areas: rheumatology, cardiology, cardiology in the aspect of neurocirculatory dystonia, immunology in the aspect of immunodeficiency states, neuropathology, endocrinology, pulmonology, otolaryngology, gastroenterology, allergology, nephrology, hematology, ophthalmology, orthopedics, speech therapy, surgery, phthisiology, oncology, nutrition, psychoneurology, dermatology, dentistry, genetics, activity of the process HIV infection.

The results of the child's examination, presented in the conclusion of the ACDE, clearly demonstrate the child's health status in the form of an «expanded map» and «highlight» its most vulnerable places. For preventive work, it is extremely important that the medical worker receives a list of profiles where hardly any pathological deviations have been observed. Thus, the child enters the zone of minimal risk or border state [2].

Objective isto study the features of the ACDE system complex in the districts of the Republic of Sakha (Yakutia) and to identify the most appropriate options for ACDE work in the districts of the RS (Y) to improve the quality of preventive

Table 1

Dynamics of number and age structure of children in the Oleneksky district

Index	Year		
	2010	2011	2012
Populationintotal	4028	4113	4155
Children from 0 to 17 years old	1349	1372	1376
includingfrom 0 to 14 years	1104	1127	1142
adolescents	245	246	234
childrenunder 1 yearold	95	80	99

Table 2

The number and frequency of pathology by pathology profiles in the Oleneksky district of the RS (Y)

Name	Allchildren		
	Total	boys	girls
Totalsurveyed	166	82	84
Total healthy children	2	0	2
Total children with pathology	164	82	82
Cardiology	92,8	92,7	92,9
Endocrinology	51,2	56,1	46,4
Ophthalmology	40,4	36,6	44,0
Stomatology	36,7	36,6	36,9
Pulmonology	21,1	24,4	17,9
Neuropathology	20,5	26,8	14
Allergology	13,3	14,6	11,9
Orthopedics	12,0	18,3	6,0
Otolaryngology	11,4	13,4	9,5
Gastroenterology	7,2	7,3	7,1

examinations.

Materials and methods.The analysis of the application of the automated complex ACDE in the districts of the Republic of Sakha (Yakutia) is made taking into account the number of children living. The approximate time of the ACDE examination was calculated and the necessary number of automated complexes for the effectiveness of medical examinations in the field was determined.

Results of the study and discussion.A pilot project in the framework of the priority national project «Health» is implemented ACDE technology in 10 districts of Sakha (Yakutia): Anabar, Abyisky, Oleneksky, Bulun, Ust-JanskyAllaikhovskiy, Lower Kolyma, Mid-Kolyma, Zhigansky, Kobyayskiy.

The use of this technology in the field made it possible to identify the following problem. In the Arctic and northern regions, 1 or 2 pediatricians are actually working, who are charged with working in the AKDO system. The time of examination of 1 child on an ACDE apparatus takes 20-25 minutes on average.

To assess the possibility of using automated systems of preventive examinations (ACDE) in the regions of the Far North of Yakutia, the Olenek region was chosen as the model object.

The Olenek district is located in the northwestern part of the Republic of Sakha (Yakutia), beyond the Arctic Circle in the Arctic zone. The distance from the village of Olenek (district center) to the city of Yakutsk is 2020 km. In the area there are 4 settlements: Olenek (732 children), Haryalah (286 children), Zhilinda (207 children), Eyik (124 children). Eyik and Zhilinda - inaccessible and remote communities, communication with them is carried out in the winter on snow road in the summer - on the river, in addition, have the opportunity to take advantage of by air. The distance from the village of Olenek to the village of Zilinda by air is 195 km, by auto-zoo - 300 km, by car, the trip takes 9 hours. Distance from settlement until Olenek sat Eyik by air is 350 km, on snow road - 600 km, a car trip takes more than 24 hours.

The population of the district is 4155 people. The population of the Olenek region is presented in Table 1. The population density is 0.0012 people per km2.

Obviously, the cost of medical care residents of the district, many times higher than the cost of citizens living in close proximity to medical facilities. The consequence of this is the actual inaccessibility of specialized and highly qualified medical care for many residents of the region (see Table 1)

Treatment and prophylactic work in the area is carried out by the Olenek Central Regional Hospital, the Zhilindinsky district hospital, the Kharyalyk medical outpatient clinic, the Eiik district hospital. Only the Olenek Central District Hospital has a license for child care.

General practitioners in the Olenek district - 1. Pediatricians in the district - 2. The trainees have the status of small plots, in the district hospitals of the villages (the village of Zilinda, Kharyalakh) there are physician-therapists, in the village of Eyik there is a general practitioner.

With the use of the automated ACDE system, 166 children were examined in the Olenek district, 117 of them in Olenka, 31 in the village of Zhilinda, 16 in the Kharyalyakh village, and 2 in the village of Eyik. The results of the survey are presented in Table 2.

The most common pathology in the nosological classes: «Cardiology» (92.8%), «Endocrinology» (50.3%), «Ophthalmology» (40.4%), «Stomatology» (36.7%), «Pulmonology «and» Otolaryngology. «

As a result of the study, a high incidence of the children of the Olenek district of the RS (Ya) was revealed. Thus, the expediency of carrying out such kind of preventive examinations is obvious.

It should also be emphasized that since the dictionary describing the child's condition in terms of ACDE includes complaints and symptoms recorded at the pre-medical level, this technique can be mastered by the average medical staff. This fact is especially important for areas where there is a problem of insufficient staffing of medical personnel.

At the second stage, we calculated the approximate time that would be needed to conduct an examination on an automated complex, based on the number of children living in different areas of the RS (Ya). Also, the number of necessary devices was calculated (see Table 3-4).

Table 3

An approximate calculation of the timing of preventive examinations using ACDE technology in the districts with the number of children from 1000-4000

Specialistload	The timing of preventive examinations using ACDE technology
Number of months of ACDE examination for the first year, if they inspect 10 children per day.	6-9 months
Number of months by ACDE if they examine 30 children per day.	For 2-4 months

Table 4

An approximate calculation of the timing of preventive examinations using ACDE technology in the districts with the number of children from 4000-8000

Specialistload	The timing of preventive examinations using ACDE technology
Number of months of ACDE examination for the first year, if they inspect 10 children per day.	From 16-40 months. (on one machine)
Number of months by ACDE if they examine 30 children per day.	For 5-13 months (on 1 device ACDE)

Conclusion.In the districts of the Republic of Sakha (Yakutia), on the automated complexes of dispensary examinations, it is possible to involve the average medical staff in the field, as this will improve the efficiency of conducting medical examinations by visiting teams. There will be selection of patients for consultation by narrow specialists. Ideally, these technologies (ACDE) would be successfully used at the school level. According to our calculations, an area with a population of up to 4,000 children requires one automated facility, and areas with a population of 5,000-8,000 children will have two automated devices if an exempt specialist works on this device.

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EXPERIENCE OF SYNTHETIC ANALOGUES OF SOMATOSTATINE FROM ESOPHAGEAL VARICEAL BLEEDING IN PATIENTS WITH HEPATIC CYRROSIS WITH SYNDROME OF PORTAL HYPERTENSION IN THE MULTIDISCIPLINARY SURGICAL CENTER OF REPUBLIC SAKHA (YAKUTIA)

ABSTRACT

The aim of the study was to evaluate the effectiveness of vasoactive therapy with synthetic somatostatin analogues from acute esophageal variceal bleeding in patients with hepatic cirrhosis with portal hypertension syndrome.

Material and methods. The study is based on a retrospective analysis of the results of a comprehensive treatment of 57 patients with cirrhosis and portal hypertension syndrome who were on treatment at the emergency surgical department of the Republican Hospital №2 − the Center for Emergency Medical Care of the Republic of Sakha (Yakutia) in the period from 2015 to 2017.All patients were divided into two groups. The first group consisted of 23 (40,4%) patients, who only used the Sengstaken-Blakemore probe to stop from acute esophageal variceal bleeding. The second group of the study comprised 34 (59,6%) patients who, together with the Sengstaken-Blakemore probe installation, used synthetic somatostatin analogues in complex intensive therapy.

Results. The presented clinical experience of the use of synthetic somatostatin analogues in complex therapy from acute esophageal variceal bleedingto recommend their wide use in the practice of urgent surgical clinics.

Conclusion. The introduction of complex intensive therapy from acute esophageal variceal bleeding in patients with hepatic cirrhosis with the syndrome of portal hypertension of synthetic somatostatin analogues allowed to reduce the overall lethality to 10,7%, and to reduce the risk of rebleeding by 17%.

Keywords: hepatic cirrhosis, portal hypertension, esophageal variceal bleeding, vasoactive therapy.

Introduction. It is well known that among a number of numerous causes of gastrointestinal-bleeding, esophageal varicose vein dilatation (EVVD) is at least 5-10% [12]. In most patients with hepatic cirrhosis (HC), a portal hypertension syndrome (PGS) occurs, which in more than 60-70% of cases is complicated by the development of gastrointestinal-bleeding [3]. According to [1], mortality even after the first episode of bleeding is more than 30%, and in 50-70% of cases, it'srebleeding. Treatment of complications of PGS, especially hemorrhage from EVVD, remains to this day an urgent problem of urgent gastroenterology due to high mortality and a large number of their rebleeding [1]. A key role in the development of esophageal varicose vein dilatation and bleeding is played by an increase in the portocaval pressure gradient. Risk factors are the degree of varicose enlargement, the presence of «red markers» and the severity of hepatic dysfunction [15]. The risk of developing bleeding from the EVVD in patients with HC within the first year is 10-15% and reaches 30% by the end of the second year of the disease [4]. If bleeding is stopped without the use of endoscopic or surgical methods, bleeding recurrence occurs in 50-70% of patients and in 80-90% in the case of a two-year follow-up [4,8]. Currently, combined treatment with vasoactive drugs and endoscopic methods is recommended [9].

Materials and methods. The presented work is based on a retrospective analysis of the results of complex treatment of 57 patients with HC and PGS who were on treatment in the emergency surgical department of the Republican Hospital №2 - Center for Emergency Medical Care of the Republic of Sakha (Yakutia) in the period from 2015 to 2017. The average age of the patients was 45,1 ± 6,5 years, with men being 38 (66,7%), women - 19 (33,3%). The diagnosis of HP and PGS is verified on the basis of a multilevel complex examination. All patients were taken to the clinic by an ambulance carriage with a clinical picture of bleeding from the EVVD and subsequently hospitalized in the intensive care unit (ICU). The volume of intensive care was determined in accordance with the recommendations of the international consensus Baveno VI (2015) (Italy) [2]. The main areas of intensive care were: the replenishment of circulating blood, the use of hemostatic and vasoactive drugs, antibiotics (for the treatment and prevention of spontaneous bacterial ascites-peritonitis), hepatoprotectors, anticoagulants. Synthetic somatostatin analogs were used as vasoactive agents