DOI 10.25789/YMJ.2023.83.32

УДК 616-005

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DENGUE FEVER IN THE REPUBLIC OF SAKHA (YAKUTIA): A CASE OF IMPORTED INFECTION

In this article, on the example of clinical observation, the course of imported dengue fever from the Kingdom of Thailand is presented. The disease proceeded with symptoms of lymphadenopathy, rash, hyperemia of the pharynx with symptoms of enanthema and mild intoxication syndrome. It is necessary to differentiate dengue fever from other infectious pathologies that occur with exanthema syndrome, enanthema, and enlarged lymph nodes. An epidemiological history also plays a significant role in the diagnostic search; if tourists who have returned from endemic countries have a fever, it is necessary to conduct an examination for Dengue fever.

Keywords: dengue fever, imported infection, fever, exanthema, lymphadenopathy, Yakutia.

Introduction. After the COVID-19 pandemic, the tourist flow towards Southeast Asia began to gain momentum again. As a result, along with this, the likelihood of the occurrence of various imported infections on the territory of the Russian Federation began to increase, incl. and dengue fever, an acute viral disease caused by an RNA virus of the Flaviviridae family and transmitted by mosquitoes of the genus Aedes [9]. Many cases of dengue infection are asymptomatic or with mild symptoms, but in some cases this infection can cause a more severe course of the disease and even lead to death [2, 5].

It is important to differentiate dengue fever from other infectious pathologies that occur with exanthema syndrome, enanthema, and enlarged lymph nodes. An epidemiological history also plays a significant role in the diagnostic search; if tourists who have returned from endemic countries have a fever, it is necessary to conduct an examination for dengue fever.

Research objective: Clinical analysis of dengue fever in the Republic of Sakha (Yakutia).

Materials and methods: the medical documents of patient V., a 31-year-old man who was hospitalized in the infectious diseases department of the State Budgetary Institution of the Republic of Sakha (Yakutia) "Yakutsk Republican Clinical Hospital" from February 23 to March 3, 2023, were studied. The considered example of dengue infection is the second case on the territory of the Republic of Sakha (Yakutia) [4].

Results: The patient was admitted to the Infectious Diseases Department on February 23, 2023 with complaints of a macular-popular, in some places confluent rash all over the body, slight skin itching and occasional fever up to +37 °C. (photo 1). There was an increase in the parotid, occipital and submandibular lymph nodes, soreness of the behind the ear lymph nodes.

Photo 1. Rash in patient V. at the time of admission (1st day of illness)

From the anamnesis: From January 17, 2023, the patient was with his wife and 3-year-old daughter on vacation in the Kingdom of Thailand (Phuket), lived in a hotel. Denied contact with infectious patient, drank bottled water, fruits, vegetables were thoroughly washed with boiled water. In the first days of rest, while swimming, he was stung by a jellyfish, after which, he noted a slight burning sensation and redness of the skin, near the wrist and on the back in the region of the left shoulder blade, which itself disappeared for 2-3 days. No insect bites were noted. On February 7, 2023, he flew with his family to Moscow, and 2 weeks later (February 22) - to Yakutsk.

On February 23, 2023, he noticed a rash on his chest in the morning and took one tablet of an antihistamine. The rash persisted; body temperature was normal. By the evening of the same day, the parotid, submandibular, and occipital lymph nodes increased. An ambulance was called. The patient, in view of the presence of a rash, lymphadenopathy, as well as the current unfavorable situation with measles, was taken to the infectious diseases department of the «Yakutsk Republican Clinical Hospital» with a preliminary diagnosis of «measles», «mumps».

Upon admission, the condition was noted as moderate. Body temperature

Rash in patient B. at the time of admission (1st day of the disease)

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+36.4 °C. The pharynx and tonsils are hyperemic, loose, clean, without raids. Tongue coated white, moist. Small punctate rash on the soft palate. There was a whitish spot in the area of the buccal mucosa on the right. Breathing through the nose is free, there is no discharge. The voice is sonorous. Breathing is vesicular, carried out through all lung fields, no wheezing. Respiratory rate 18 per minute, SpO2 98%. Heart sounds are muffled, rhythmic. Pulse 84 beats per minute, blood pressure 110/60 mm. rt. Art. The abdomen is soft and painless. Symptom of irritation of the peritoneum is negative. Liver on the edge of the costal arch. The symptom of tapping is negative on both sides. Diuresis is adequate, urine is light. Urination free, painless. The bowel movement is regular, formed. There is no peripheral edema.

According to paraclinical research methods, the report notes: leukopenia (3.98x10* 9 / l), monocytopenia (0.40x10* 9 / l), C-reactive protein is normal, alanine aminotransferase and aspartate aminotransferase are increased (77.3 units / l and 36.6 u/l). A preliminary diagnosis of "Measles" or "Infectious enanthema" was made. The patient was placed in a boxed ward, diet "table number 15", detoxification therapy, mouth rinses with antiseptics, antihistamines were prescribed. During the treatment, the rash disappeared on the 4th day, the body temperature did not increase from the moment of admission.

In the analyzes in dynamics from February 27, 2023, it was revealed: - in the general blood test: leukocytes 6.97 x 109 / l (4.00-10.00) monocytes 8.40% (3.00-12.00) monocytes 0.59 x 109/l (0.12-1.20), basophils ↑ 1.70% (0.00-1.00), basophils ↑ 0.12 x 109/l (0.00 - 0.10), platelets ↑ 315.00 x 109/l (100.00-300.00), thrombocrit ↓ 0.22% (1.08-2.82), ESR ↓ 2.0 mm/h (3.0-10.0);

- in a biochemical study: total cholesterol ↑ 5.3 mmol/l, gammaglutamyl transpeptidase ↑ 81.0 U/l, alanine aminotransferase ↑ 51.4 U/l, aspartate aminotransferase 22.5 U/l, C-reactive protein 1.5 mg /l;

- ELISA for measles anti-IgM - negative, anti-IgG (+), for rubella IgM - negative, anti-IgG (+), for Epstein-Barr virus IgM - negative, anti-IgG (+)

- according to ultrasound examination of the abdominal organs: Diffuse changes in the liver parenchyma. Diffuse changes in the parenchyma of the pancreas. Seal of the pelvicalyceal system of both kidneys.

On February 28, 2023, a consultation was held. Based on the patient's complaints, anamnesis, physical examination, instrumental and laboratory tests, the diagnosis was made: Allergic urticaria, of moderate severity, it was recommended to be tested for dengue fever, PCR for HIV.

Taking into account the above complaints, epidemiological history and clinical data, a serum sample for dengue, zika, chikungunya fever was taken and sent for a reference study to the FBSI SRC VB "Vector" of Rospotrebnadzor.

The reference study by immunochromatography dated March 3, 2023 established the presence of specific class G antibodies to the dengue virus and the final diagnosis was made: "Dengue fever, moderate severity."

IgG antibodies are usually detected in low titers at the end of the 1st week of illness, slowly increase in the future and can remain in the blood of the ill person for life.

Patient V. was discharged on the 8th day from the start of hospitalization with improvement.

The rash completely disappeared on the 4th day. In general, according to the Ministry of Tourism and Sports of Thailand, their country was visited by 435,000 tourists from Russia in 2022, and by the end of 2023, this indicator may increase more than two times [6]. Cases of dengue fever were registered in 2020-2022. in 35 subjects of the Russian Federation. During this period, 159 cases were detected, 93 of which (58.5%) were imported from Thailand, 11 from the Republic of Maldives, 8 from Vietnam. Dengue fever has also been reported in returnees from Africa (Egypt, Tunisia, Central African Republic, South Africa, Kenya, Seychelles, Republic of Chad), South Asia (India, Maldives, Sri Lanka), Southeast Asia (Indonesia, Cambodia, Philippine Islands), East Asia (China), North America (Mexico), West Indies (Cuba, Dominican Republic, Guadeloupe), Europe (Spain). The largest number of cases was detected in Moscow (in 2020 - 28 cases, in 2021 - 5, in 2022 - 16), the Novosibirsk region (in 2020 - 16 cases, in 2021 - 2, in 2022 - 3). During 2013-2019 there was a tendency to an increase in the total number of imported cases of dengue fever to the territory of Russia, and since 2020 - a decrease (Table). Obviously, this is due to the introduction of quarantine measures aimed at containing the COVID-19 pandemic [3].

The activity of mosquitoes that spread dengue occurs during the daytime hours, which is important for the prevention of infection with this infection. To reduce the risk of dengue infection, it is necessary to wear clothing that covers the body as much as possible. During daytime sleep, use mosquito nets, ideally treated with insect repellant. You should also use window screens, repellents containing DEET, picaridin or IR3535, coils and mosquito repellents.

So far, only one vaccine against dengue (Dengvaxia) has been registered and approved for use in some countries. It, however, only protects people who have previously been infected with the dengue virus. There are several other candidate vaccines against dengue currently under study [1, 7, 8].

Conclusion. In connection with the growth of tourism to countries with a trop-

Number of reported cases of dengue fever in Russia in 2013-2022

Year	Country where possible infection occurred								Total for a year
	Thailand	Vietnam	Indonesia	India	Philippines	Maldives	Sri Lanka	Other	
2013	127	9	12	6	4	1	0	11	169
2014	54	17	12	4	4	2	1	11	105
2015	65	23	19	3	3	4	3	16	136
2016	45	32	26	4	9	2	3	24	145
2017	100	34	6	10	6	3	4	33	196
2018	179	25	1	4	0	8	1	41	259
2019	260	64	16	10	8	16	14	27	415
2020	88	5	3	1	3	1	2	18	121
2021	0	1	1	1	0	2	2	2	9
2022	5	2	1	3	0	8	4	6	29
Total	923	212	97	46	37	47	34	189	1584
Distribution in %	58.4	13.3	6.1	2.9	2.3	3	2.1	11.9	100

ical and subtropical climate, where there is a high risk of infection with the dengue fever virus, it is necessary that doctors of narrow specialties, district therapists and pediatricians should be informed and familiarized with the theoretical basis of the clinic of this infection, since timely detection and provision of proper medical care contribute to a significant reduction in mortality rates from severe cases of dengue.

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A CLINICAL CASE OF NON-IMMUNE HYDROPS IN A PREMATURE NEWBORN WITH A CHROMOSOMAL ANOMALY

DOI 10.25789/YMJ.2023.83.33

УДК 616-053.32:616.5-005.98:616-007.1

The article presents the features of diagnosis and dynamic monitoring of a premature baby with non-immune dropsy on the background of a chromosomal anomaly (Down syndrome). The data of scientific literature on the epidemiology and etiology of this disease are analyzed, as well as the outcomes of the disease are considered.

Keywords: non-immune fetal hydrops, NIFH, premature newborn, chromosomal abnormalities, trisomy of chromosome 21, Down syndrome.

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Introduction. Non-immune fetal hydrops (NIFH) - is defined as an accumulation of extravascular fluid in two or more serous cavities and fetal tissues that occurs at various stages of pregnancy in the absence of circulating antibodies to erythrocyte membrane antigens. Fluid accumulation can be in the subcutaneous space (more than 5 mm), pericardial, pleural and abdominal cavities [1, 2, 3]. NIFH was first described in 1892 by J.W.Ballantyne [1].

The registered incidence of non-immune fetal hydrops is about 3 per 10,000 births, however, the incidence is significantly higher due to spontaneous or artificial termination of pregnancy in the first and second trimesters [2].

Non-immune fetal hydrops is based on various causes (more than 150 nosologies), which, according to the results of a large-scale study conducted by Bellini et al. (a systematic review that included an analysis of 5,437 cases of NIFH) were divided into 14 categories. Among them, chromosomal abnormalities occupy one of the leading places and are represented by trisomies, triploidies and monosomy X, regardless of the presence of concomitant fetal malformations [3].

Due to the widespread use of ultrasound, in most cases non-immune hydrops is diagnosed prenatally [4]. The criterion for diagnosis is an excessive accumulation of fluid in two or more areas of the body (chest, abdominal cavity, pericardium, skin). In most cases, NIFH is a fatal condition - mortality with NIFH, according to some data, reaches 90%. NIFH over time, as a rule, remains unchanged or gradually increases, however, cases of its spontaneous resolution are described. Information about the prognosis for fetuses with non-immune dropsy is extremely scarce due to high