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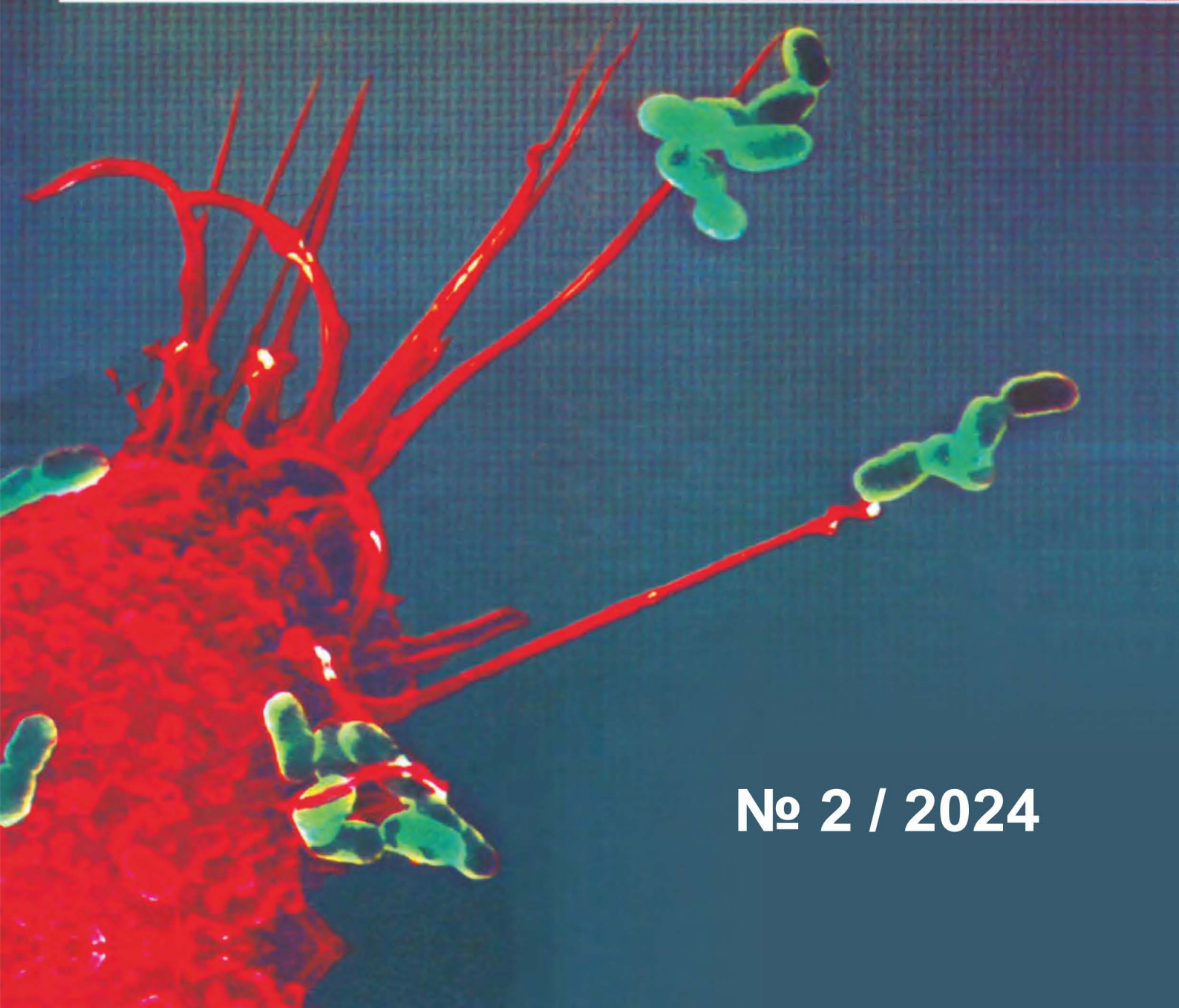
ИНФЕКЦИЯ, ИММУНИТЕТ и ФАРМАКОЛОГИЯ



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ИНФЕКЦИЯ, ИММУНИТЕТ и ФАРМАКОЛОГИЯ

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коронавирус инфекцияси билан оғриган беморлар 2019 йил декабрда Хитой Халқ Республикасининг Ухань шаҳрида аниқланган. 2020 йил февраль ойига келиб эса COVID-19 билан оғриган беморлар Европа мамлакатларида ҳам аниқлана бошлади ва касаллик пандемия кўринишида бутун дунёга тарқалди. COVID-19 короновируслар оиласига мансуб атипик зотилжам касаллигини чақирувчисига ўхшаб кетувчи вирус бўлиб, беморларда оддий шамоллашдан то ўткир оғир респиратор синдромгача олиб борувчи касаллик ҳисобланади.

Коронавирус инфекцияси 1960 йиллар ўрталарида аниқланган, РНК сақловчи вирус бўлиб, хозирги кунда 43 та тури фанга маълум. Улардан 6 та тури одамларда касаллик чақириш хусусиятига эга.

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CLINICAL FEATURES OF FOODBORNE BOTULISM

Tuychiyev Laziz Nodirovich, Khudaykulova Gulnara Karimovna, Maksudova Zulfiya Sanatovna, Abidov Akrom Burievich, Ernazarov Botir Bahodir ugli

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Due to the polymorphism of clinical manifestations, peculiarities of spread and severity of the course, botulism has a special place among infectious diseases. Home canning, pickling, and smoking of fish and meat products without observing the appropriate technologies survived to this day and is still widely used. This affects the intensity of epidemic manifestations of this infection. Mostly, the infection occurs through the consumption of food containing botulinum toxins and the pathogen Clostridium botulinum itself. The timeliness of specific therapy, together with the severity of clinical symptoms, determines the course and outcome of the disease. According to various studies, 20-70% of cases are fatal. [1] Based on clinical, epidemiological and laboratory data, the diagnosis is made in the earliest stages of development. Currently, however, methods of laboratory diagnosis of botulism are used, which are very labor-intensive and costly. They require the creation of special conditions for analysis or the use of special expensive equipment [2].

In turn, humans most often become infected with botulism when eating spore-infected home-canned mushrooms, vegetables, fish, meat, lard, etc. Rarer forms such as wound botulism and neonatal botulism also occur. [3] Of all the biological poisons distributed throughout the world, botulinum exotoxin is one of the most dangerous. Lethality in severe forms of this botulism ranges from 5 to 50% [4].

In the early stages of patients seeking medical help is difficult due to the fact that the symptomatology of the disease may not yet be clear and not fully developed. The age of patients seeking medical care is also important. These facts also have a negative impact on the detection of infection. In the clinical picture, depending on the nature of the pri-

mary manifestations, two variants of the initial period are distinguished: ocular and gastroenteric. [5] In the first variant, botulism begins with general cerebral symptoms: dizziness, headache. Then there is general muscle weakness and visual disturbance in the form of subjective feeling of blurring of objects. Also, if you conduct a more detailed examination and questioning, you can identify bilateral mydriasis, weakened photoreaction of the pupils, marked dryness of the mouth (due to decreased saliva secretion), difficulty in swallowing solid and liquid food. Further neurological symptoms may increase, and as a result, botulism can be perceived as a decompensation of blood circulation in the vertebrobasilar basin, as well as acute cerebral circulation disorder (ACCD) in the brain stem area. The age group at risk is the elderly people. In these diseases, there is also abundant vomiting of central genesis and the classic symptom complex "4D". In the second variant, the disease begins on the contrary, with dyspeptic syndrome with the appearance of liquid stools up to 3-5 times a day. These manifestations are short-lived, and in 6-24 hours they cease with the development of neurological symptomatology. Difficulties of differential diagnostics of both nosological forms in elderly people increase with the presence of vascular history and background diseases of the cardiovascular system. Bacteriological method has a high accuracy. It is performed using a neutralization reaction on white mice. To confirm the diagnosis, it is necessary to detect the toxin in the blood or vomit of the patient. Next, the experimental animals are injected with 0.5 ml of the blood of the patient, and the control group animals are injected with the antibotulinizing serum together with the blood of the patient. If the group of experimental animals injected with blood only dies and the other group survives, the diagnosis is considered to be confirmed. [7] However, this test is relatively time-consuming. Therefore, prior to this test, the diagnosis is made on the basis of basic diagnostic criteria. These include the presence of epidemiological evidence (consumption of home-made canned foods, dried fish, etc.), clinically significant ophthalmoplegic symptomcomplex: ptosis, impaired pupil response to light, horizontal nystagmus, diplopia, impaired eyeball movements, convergence, accommodation, mydriasis; bulbar symptomatology - paresis of the soft palate and, as a consequence, nasality of voice, absence of reflex from the root of tongue and posterior pharyngeal wall, swallowing disorders, paresis of epiglottis (when taking water, choking), paresis of breathing muscles. As a result, there is the development of acute respiratory failure and speech impairment. The lesion of the autonomic nervous system, on the other hand, is accompanied by dryness of the oral cavity. [8]

In the form of sporadic cases or outbreaks, botulism occurs in all countries of the world. When eating canned food of animal or vegetable origin contaminated with clostridia, a person becomes infected and acquires a more or less pronounced clinic, depending on the amount of bacteria and botulinum toxin ingested. Humans have a high natural susceptibility to botulism. [9] The clinical forms of the disease are categorized in the following order of occurrence. Food botulism, which accounts for 80% or more of all cases, infant botulism as a consequence of ingestion of spores of the

pathogen into the gastrointestinal tract of children with subsequent reproduction of the pathogen and toxin formation, wound botulism, which develops when the pathogen enters traumatized tissues (up to 10%).[10] In terms of age structure, there is a predominance of patients aged 30 to 50 years. In children, cases of botulism are extremely rare. [11]

Typical ophthalmoplegic and bulbar symptoms of botulism, gastrointestinal syndrome are not mandatory. Apparently, in addition to the clearly delineated clinical picture described above, atypical forms are also observed. [12] This fact, is the reason for sporadic diagnostic errors. On this basis, **our aim is to modify the method of differential diagnosis of foodborne botulism.**

Research methods and results.Two infectious diseases hospitals in Tashkent were chosen as study sites. As subjects, doctors were chosen, who were divided into two groups. The first group consisted of 12 doctors on duty in the admission department of RSPCEMIPD (Republican Scientific and Practical Center for Epidemiology, Microbiology of Infectious and Parasitic Diseases). The second group consisted of another 7 doctors from the emergency department of the Zangiata District Infectious Diseases Hospital in Tashkent oblast. The first group was given the "BMI wheel" model, which included, in addition to botulism, the main clinical symptoms of 16 different diseases similar to the clinical symptoms of foodborne botulism. The second group was given an algorithm for the comparative diagnosis of foodborne botulism. Both groups were given a lecture on "comparative diagnosis of foodborne botulism." After the event, a pre-test (pre-test) was conducted, using test questions developed by us. Then the correct answers were counted. According to the results obtained, the average score of group 1 doctors was 74,3±0,85 points, and for group 2 doctors this score was 74,9±1,2 points. No statistically significant difference was found between the groups ($P>0.05$). One year later, another meeting was arranged with both groups of physicians. A post-test with the same questions was conducted. This time, according to the test results, the correct answers of the 1st group doctors were 85,5±1,3 points, and in the 2nd group this figure was 77,8±0,97 points. The difference between the groups was statistically significant ($P<0.05$). Consequently, the first group, which used the BMI wheel technology, showed a dynamic improvement in their knowledge on the topic of differential diagnosis of botulism. The doctors in the second group also had improved test results, but they were not statistically significant ($P>0.05$). The doctors of the first group had an average score of 8,75±0,65 on the scale from 1 to 10; the doctors of the second group had an average score of 3,9±0,76. As can be seen from the results of doctors' assessments, the effect of using the "BMI wheel" was statistically significantly higher in comparison with the effectiveness of the algorithm ($P<0.001$).

Twenty-two patients with suspected food-borne botulism presented themselves to the emergency department of the RSPCEMIPD clinic. The diagnosis was confirmed in 15 (68.2%) of these patients. Twelve patients with suspected food-borne botulism were admitted to the reception department of Zangiata district infectious hospital in Tashkent province and the diagnosis was confirmed in four (33.3%) patients. The frequency of diagnosis confirmation among

the doctors in the 1st group was significantly higher than in the 2nd group (Chi-square test with plausibility correction $\chi 2=3.864$; $P<0.05$).

The results show that the BMI-wheel model improves the quality of differential diagnosis of food-borne botulism. Consequently, it leads to an early diagnosis of the disease and subsequently it reduces the number of fatal cases from this infection.

Conclusions. The effectiveness of the BMI wheel model in the differential diagnosis of edible botulism was determined as a result of the study:

The positive effect was expressed in a convincing increase in the theoretical and practical knowledge of foodborne botulism among physicians who used the BMI-wheel training model.

As a result of increased timely diagnosis of botulism and, as a consequence, early specific therapy with type A, B and E antibotulinum serum, the rates of fatal outcome of the infection were significantly reduced.

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РЕЗЮМЕ
КЛИНИЧЕСКИЕ ОСОБЕННОСТИ ТЕЧЕНИЯ ПИЩЕВОГО БОТУЛИЗМА

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Ключевые слова: ботулизм, пищевые отравления, дифференциальная диагностика.

Несмотря на то, что количество регистрируемых случаев ботулизма в последние годы сократилась, данное заболевание все еще остается актуальной проблемой современности.Практикующие врачи различных специальностей продолжают сталкиваться с трудностями постановки диагноза в ранние сроки. Одновременно, от ранней выявления и немедленного введения сыворотки зависит исход заболевания. Данный факт, ставит вопрос повышения точности дифференциальной диагностики ботулизма.

REZYUME
OVQAT BOTULIZMINING O‘ZIGA XOS KLINI KECHISHI

Tuychiyev Laziz Nodirovich, Khudaykulova Gulnara Karimovna, Maksudova Zulfiya Sanatovna, Abidov Akrom Burievich, Ernazarov Botir Bahodir ugli

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Kalit so‘zlar: botulizm, ovqatdan zaxarlanish, qiyosiy tashxisot.

Oxirgi yillarda botulizm kasalligi kam uchrashiga qaramasdan dolzarbligicha qolmoqda.Tor mutaxassis shifokorlari xanuzgacha kasalliklarga erta tashxis qo‘yishda qiyinchiliklarga duch kelmoqdalar.Kasallikni oqibati ham zardobni erta yuborilishiga bog‘liqdir.Bu omil o‘z navbatida botulizmni qiyosiy tashxisotiga aniqlik kiritish kerak ekanligi anglatadi.