



## **COURSE, CLINIC, DIAGNOSIS OF BOTULISM IN CHILDREN AND ADOLESCENTS OF SCHOOL AGE**

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### **Abstract:**

In this article, the complicated course of botulism in children of school age is presented in clinical observation. Also, the tactics of laboratory tests, treatment approach and clinical effectiveness of treatment are shown.

**Keywords:** botulism, botulotoxin, dysphagia, aphonia, apnea, tachypnea, ptosis, diplopia, mydriasis, anisocoria.

**EFFECTS:** Botulinum neurotoxin is one of the most powerful and deadly substances. As little as 1 ng/kg can be fatal to humans. Scientists estimate that 1 g of botulinum toxin is 1 mln. they assume that they are capable of killing people. Because small amounts of the toxin can kill people, it can be used as a weapon for bioterrorism. All forms of botulism can be fatal and are considered an emergency. The toxin is quickly absorbed by the digestive system, so many people get poisoned even after eating small amounts of contaminated food.

The preserved history of botulism: originally in 1735, the disease was German associated with sausage. The outbreak was linked to food poisoning after eating sausages. In 1870, a German doctor named Müller called this disease botulism, derived from the Latin name for sausage. Clostridium bacteria were first identified in 1895, and neurotoxin was isolated by Dr. Edward Schantz in 1944. Botox was approved by the Food and Drug Administration in 2002 for cosmetic improvement and wrinkle reduction.[1,2,3,4]

According to statistics, from 1735 to 1924 in Western Europe, 4144

1271 people died of botulism. There were 417 botulism outbreaks in France, and their number exceeded 1,000. There were 101 outbreaks of botulism in Russia from 1818 to 1913, during this period, 609 people fell ill and 283 people died (46.8%). From 1920 to 1939, according to press reports, there were 62 botulism epidemics in the former USSR, 674 people fell ill and 244 people died (36.2%).

**Clinic:** The latent period of the disease lasts from 2 hours to 8 days. In foodborne botulism, symptoms usually begin 18 to 36 hours after eating the contaminated food, but symptoms can appear as late as 6 hours or as long as 10 days.[5]

Classic symptoms of botulism include: blurred vision, blurred vision, drooping eyelids, difficulty in speech, swallowing

difficulties, dry mouth, muscle weakness (leading to flaccid paralysis).

Differential diagnosis: history and physical examination of the patient botulism

can show, but these tests alone are not enough to diagnose botulism. The symptoms of botulism are similar to those of other diseases, such as stroke, Guillain-Barre syndrome (another disease that causes muscle paralysis), and myosthenia gravis (which causes the eyelids to droop). Special tests are required to rule out these other diseases. The most direct way to confirm the diagnosis is to detect botulinum neurotoxin in the patient's blood or stool. [6]This is done by injecting the patient's blood or feces into the abdominal cavity of the mouse. An equal amount of blood or stool sample is taken from the patient, neutralized with antitoxin and injected into mice.[7]

The same sample is injected into another mouse without disinfection. If the disease is present, the first mouse will survive and the second will die. These tests help distinguish botulism from infectious diseases caused by Escherichia coli, salmonella and other bacteria.[8]

Results of private research. Botulism is considered a seasonal disease

botulism is recorded mainly from November to May. In Table 1, we presented information on patients treated with botulism in 2017-2021 at the Fergana branch of the Republican Specialized Epidemiology, Microbiology, Infectious and Parasitic Diseases Scientific and Practical Center.

**Table 1**  
**The occurrence of botulism in adults and children**

Nº	of years	Total number of cases	Adults	Children
1	2017	4	3	1
2	2018	12	11	1
3	2019	6	6	-
4	2020	6	5	1
5	2021	10	8	2



The table shows that the disease is more common in adults than in children it occurs 3-5 times more often. The main reason for this is that older people love to eat home-made pickled cucumbers, tomatoes, patisserie, peppers, mushrooms, canned cabbage, eggplant caviar and smoked fish. Clinical observation: Republican specialized epidemiology, A 16-year-old patient named M. was put under clinical observation during practical training at the Fergana Branch of the Scientific and Practical Center of Microbiology, Infectious and Parasitic Diseases. Patient's complaint: Bringing doctor - reanimator, relatives (aunt, aunt) and from the staff on duty: inability to swallow, nausea, general weakness, weakness, dizziness, staggering like a drunk, weakness of legs and arms, inability to breathe independently, increased body temperature, eyelids drooping and squinting, double vision and change of voice in the first days, restless motion of limbs while lying down. In the epidemiological anamnesis, the patient opened and drank canned tomato-cucumber juice at home with his father on 06.12.2021. He had breakfast in the morning and went to school. According to the school nurse, he complained of headaches and dizziness during the day. When he came home, when his brother gave him tea and bread, he felt nauseous and vomited. Since the vomit mass was brown, he was taken to the emergency department of Zilkha, Altiriq district. He has not received any injections and has not traveled abroad in the last 6 months. The patient did not receive blood or blood products.[9] When viewing the lens: The general condition of the patient during the viewing is serious. Inadequate visual response. Khushi is low, responds by moving her hands when asked in a loud voice, reaction to the environment is kept very slow. [10] Decreased muscle tone in the legs. Breathing through an endotracheal tube. Pupil OD=OS, dilated, no photo-reaction to light. He cannot swallow, a nasogastric tube is inserted. The patient is relaxed, lethargic. The palms of the hands and feet are stiff, the movement is involuntary. Answers questions slowly with gestures. The eyelids are somewhat swollen, drooping (ptosis), and the face is swollen. An intubation tube was tamponed in the oral cavity.[11] The body structure is correct, there is no deformation and peripheral swelling. Neck muscle rigidity and meningeal signs are negative. Peripheral lymph nodes are not enlarged, not palpable. Lips and tongue are dry, there is discharge. Body temperature is 37.0 C. [12] The skin and visible mucous membranes are

slightly pale, the skin is clean and dry. Rough breathing is heard in the lungs against the background of the IVL device. Heart sounds are rhythmic, muffled, Pulse is weakly full and tense in the periphery, 96-100 beats per minute, arterial blood pressure equals 96/42 mmHg. The abdomen is soft, but there is no pain.[5] Liver and spleen are not palpable. Intestinal peristalsis is heard.

The litter is yellow, slightly liquid, brown in color. Conclusion: The patient's condition is extremely serious, body intoxication, bulbar syndrome, respiratory failure level 3, heart failure level 2 due to respiratory distress syndrome.

Initial diagnosis: Botulism. Bulbar paralytic form. Extreme severity.[14]

Complication: acute respiratory failure level 3, acute cardiovascular failure Level 2.

### CONCLUSIONS:

1. Since the disease is very rare, it is treated by doctors in many cases it leads to diagnostic errors due to negligence in collecting epidemiological anamnesis. According to the results of clinical and epidemiological investigations, in most cases, instead of the diagnosis of botulism, the diagnosis of acute intestinal infection, acute disorder of cerebral blood circulation, myasthenia, hypertensive crisis, encephalitis is made.
2. During the seasonal outbreak of the disease, medical personnel, production carrying out sanitary-educational work about the origin and complications of botulism at the workers of enterprises, organized and non-organized youth, community gatherings.
3. Early detection of botulism by a general practitioner and emergency care must have the necessary and sufficient knowledge to demonstrate. Early diagnosis and timely pathogenetic treatment reduces complications and mortality of botulism.

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