

## Case of Anthrax Abdominal Form in Kazakhstan

Dmitrovskiy A<sup>1\*</sup>, Syzdykov M<sup>1</sup>, Kim A<sup>2</sup>, Ospanbekova N<sup>1</sup>, Kamytbekova K and Maukayeva S

<sup>1</sup>National Science Center for Extremely Dangerous Infections

<sup>2</sup>Karaganda Medical University,

<sup>3</sup>Kazakh-Russian Medical University

### \*Corresponding author:

Andrey Dmitrovskiy,  
National Center for Biotechnology, Central  
Reference Laboratory, 14 Zhahanger St.,  
Almaty, 050054, Kazakhstan,  
E-mail: am\_dmitr@mail.ru

Received: 05 Nov 2021

Accepted: 26 Nov 2021

Published: 03 Dec 2021

J Short Name: ACMCR

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### Citation:

Dmitrovskiy A, Case of Anthrax Abdominal Form in Kazakhstan. Ann Clin Med Case Rep. 2021; V7(18): 1-2

## 1. Introduction

Anthrax is a dangerous zoonotic infection that is transmitted from farm animals to humans, when cutting, butchering infected animals, contact with meat and other animal products. Infection occurs by contact, alimentary, aerogenic pathways, while developing corresponding clinical forms - skin /ulcerative, abdominal / intestinal, pulmonary /pneumonic

Kazakhstan is an anthrax-endemic territory, cases of this infection are registered almost annually [1].

As a rule, a cutaneous or ulcerative form of infection develops, the appearance of other forms can cause difficulties in clinical diagnosis. It is very important to clarify the presence of risk factors for infection, which helps to suspect anthrax in a timely manner [2].

This report presents a case of abdominal form of anthrax, which caused difficulties in timely clinical diagnosis.

## 2. The Case Study

A 50-year-old woman was taken by ambulance to the Karaganda regional clinical hospital on 06/18/2016 (3rd day of illness) with a diagnosis of acute pancreatitis. There was general weakness, pain in the epigastrium and right hypochondrium, nausea and vomiting. She became ill acutely 3 days before admission, the condition gradually worsened and she called an ambulance.

Upon admission, the condition is medium-severe, blood pressure is 90/70, pulse is 96 / min., heart tones are deaf, breathing is 20 / min. The abdomen is somewhat swollen, moderately painful in the epi-mesogastric region and the right hypochondrium. There was a single vomiting.

In the blood – leukocytes 9.8 10<sup>9</sup>/L; on ultrasound - diffuse changes in the pancreatic parenchyma. Infusion-detoxification therapy was begun. However, the patient's condition continued to gradually worsen, general weakness, hypotension, nausea increased, there was liquid stool 1 time.

With repeated ultrasound on 20.06.2016 (5th day of illness) fluid was found in the abdominal cavity. A primary skin affect appeared and on the lateral surface of the metacarpal phalanx of the 5th finger of the left hand, - hyperemic papule 1 cm in diameter with perifocal edema.

An additional targeted survey on risk factors was conducted – the patient bought and butchered the meat of a sick cow, cooked food from this meat, and also tasted raw minced meat - a probable diagnosis of anthrax was established, since the owner of the sick cow had already been hospitalized with a confirmed case of anthrax. On the same day, the patient was transferred to the regional infectious diseases hospital.

Upon admission to the infectious diseases hospital, the condition is already assessed as very severe, consciousness is confused, with bouts of excitement, vomiting dark red blood, blood pressure is not determined, pulse is threadlike, shortness of breath, oliguria. The skin is pale, cold, acrocyanosis. i.e., the patient developed the phenomena of Shok of the 3rd degree and DIC syndrome.

On the skin in the area of the left wrist there is a primary cutaneous affect in the form of a hyperemic papule 1 cm in diameter with perifocal edema. On the inner surface of the left shoulder, in the left axillary region, on the left lateral surface of the chest there are petechial and larger hemorrhagic elements. The stomach is swollen,

painful in all fields. The left axillary lymph nodes are enlarged, painful; polyadenitis is also noted.

In the blood – hyperleukocytosis ( $45.1 \times 10^9/L$ ); in the urine - protein; in biochemical samples hyperbilirubinemia, increased transaminases.

Subclavian vein catheterization was performed, infusion therapy with a combination of saline and colloidal solutions up to 2 liters, vasopressor, complex antibacterial therapy (ceftriaxone, levofloxacin, intravenously), glucocorticoids (prednisolone 240 mg, intravenously), aminocaproic acid, stimulation of diuresis was initiated.

Bacteriological blood test from 20 06 2016 - isolation of *Bacillus anthracis*; PCR - positive.

Despite the treatment, the patient died on the 5th day of illness.

### 3. Conclusion

The disease proceeded atypically, until 5th day of illness there was no clinical data allowing to suspect anthrax. After establishing a probable diagnosis, the patient was comprehensively examined, which made it possible to confirm the diagnosis. The patient received complex therapy in due volume. Unfortunately, the patient did not receive anti-anthrax immunoglobulin / antitoxin, without which there was no chance of saving the patient [3].

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