

The Accidental Explosion at a Secret Biological Weapons Plant at Sverdlovsk

In late April 1979, an explosion occurred in the test laboratory of a Soviet Army installation located within Sverdlovsk, in the military community of Voyenny Gorodok 47, between the suburbs of Vtorchemet and Chimmach (Khimash), in the city district of Chkalov, five kilometers south from an airfield known as Sverdlovsk-Uktusk. Located just west of the military community is a ceramics factory that produces sinks, bath tubs, and toilet bowls. A streetcar line from downtown Sverdlovsk terminates at the ceramics factory at a stop called "Keramik Zavod".

The source of the explosion is unknown, however, bacteria cultures present in the facility were released into the air and entered industrial and residential areas of the city. Quarantine measures were taken by the military authorities. Endangered city districts were blocked off, and Army chemical units applied decontamination and sterilization compounds.

Four days after the explosion, seven or eight persons from the military installation (Voyenny Gorodok 47) were admitted to local hospital Number 20, in Chimmach. These persons were suffering from a mysterious disease which was at first thought to be influenza. The illness came on suddenly, with temperatures of 104 degrees F (40 C), blue coloration in mucous membranes, hypoxemia, septicemia, choking and with significant difficulty breathing. Hemorrhagic patches were not in evidence. Death followed within 6 to 7 hours, usually following sudden heart failure. Autopsies revealed severe pulmonary edema and toxemia.

The first casualties were a large number of male Army reservists, all graduates of a technical institute in Sverdlovsk (engineers and electronics specialists), who were on active duty for a military exercise at Voyenny Gorodok 47. There were also casualties among the workers in the ceramics factory adjoining the military installation on the west, in the suburb of Vtorchemet. It appears that biological agents had been introduced into the building through the ventilation system. The exact number of casualties is unknown. The official total is 200, however several unofficial estimates indicate that there were 1000 deaths within the first week and another 1000 by the end of the epidemic. The antibiotics Sigmamycin (US), Kanamycin (West German) and Morphocacyclin (USSR) were reportedly effective treatments.

Six days after the first victims appeared, with approximately forty deaths at hospital Number 20, the head of the health district notified health workers that the disease was an outbreak of Anthrax. The source was allegedly from contaminated meat from Berezovskiy, fifteen kilometers north-east of Sverdlovsk. This announcement was met with some skepticism by health-care workers, because most cases of Anthrax involved infection through the skin. In this epidemic, all cases involved the lungs, which is normally very rare.

District hospitals were directed to immediately transfer all infected persons and persons with whom they had come into contact to a local hospital for infectious diseases, known as hospital "Number 40" (located in the suburb of Verkhne Isetrkiy). In most cases, although all available medications were used, the patients died of the consequences of the disease: very high fever, suffocation from pulmonary edema, and sudden heart failure. There was speculation in some civilian medical circles that the biological agent was not Anthrax. Instead, it was believed to be an agent with an active ingredient based on a male hormone, which spreads rapidly through the blood stream and causes heart attacks in the victims, especially in males. 85% of the casualties were males.

Personnel working in hospital Number 40 received vaccinations and non-epidemic patients were evacuated to other hospitals. Several weeks after the first deaths, all personnel at hospital Number 40 were given 6-8 grams of tetracycline daily. Shortly after this, the hospital was sealed off by military personnel and completely run by Army doctors and medical staff. The vaccinations reportedly used Anthrax serum, although some medical personnel believed that it was something else because of the post-vaccinations symptoms, including high fevers (over 104 degrees F, 40 degrees C). Civilian doctors at other hospitals were prohibited from treating the affected with anything more than first aid.

It also became apparent that persons in contact with infected persons were not themselves in danger of infection, including those performing mouth-to-mouth resuscitation of dying victims. Apparently infection required direct contact with the airborne agent.

Minister of Defense Ustinov and Minister of Health Petrovski visited the area two weeks after the explosion, although no publicity was given to the visit. The chief epidemiologist of the Moscow Ministry of Health set up a portable laboratory and stayed for several weeks. The explosion was not reported in the press or other news media in any way.

Wild animals in a nearby forest were also killed. Most of the dogs in the district were collected and destroyed. Farm animals in surrounding areas also died. Pigs developed blue sores all over their bodies. Veterinarians were ordered to confiscate sick animals and have them destroyed. Healthy animals were vaccinated.

The population in some areas within 500 kilometers of Sverdlovsk (apparently downwind) were directed to report for medical examination for a possible epidemic. A travel and visitation ban was put in effect in most areas, and lasted until November. Mail was suspended during this time, and no meat was available. Many other foods were also unavailable. There were rumors of a chemical accident that resulted in the release of a large amount of bacteria. Some areas required medical measures, others only quarantine. For example, the city of Novaya Lyalya (100 kilometers south of Sverdlovsk) and the city of Berezovskiy (15 kilometers north east of Sverdlovsk)

required medical measures (vaccinations and antibiotics), while the city of Karpinsk (350 kilometers north west of Sverdlovsk) received quarantine measures only.

The dead were placed in chloramine and then buried. Later the bodies were exhumed and treated with a different disinfectant solution and then reburied. Relatives were not permitted at the funerals. Cremations were not performed for lack of suitable facilities.

Large areas of the military installation Voyenny Gorodok 47 were excavated to a depth of 40 meters; the topsoil buried to that depth, and the surface then covered with asphalt. The ceramics factory was sprayed inside and out with chloramine. On 14 May, public notices were distributed which ordered residents to stay inside between 1400 and 1500 hours. The Chkalov city district was then sprayed from the air (5 x 7 kilometer area). Open areas and fields were decontaminated by groups of students. The population was ordered to drink only boiled water.

The number of infected persons reporting for treatment subsided in early June. Hospital Number 40 was returned to civilian control in early September.

The general officer in charge of the military installation Voyenny Gorodok 47 reportedly committed suicide soon after the first casualties occurred.

The facilities at the Voyenny Gorodok 47 military community, that had been the source of the explosion, were not rebuilt.