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ISOLATION OF BACILLUS ANTHRACIS FROM SOIL IN SELECTED HIGH-RISK AREAS OF AZERBAIJAN IN 2017

Sheyda Shikhaliyeva, Rita Ismayilova, Gulxar Jahanova, Sabina Ibrahimova and Rakif Abdullayev

Republican Anti-Plague Station, Azerbaijan

The problem of anthrax spread remains very serious for Azerbaijan. There are some permanent high-risk areas with multiple pockets of anthrax infection in the soil, which persist for a long time. This unresolved problem can potentially lead to new epizootics, the possibility of spreading the pathogen outside the epizootic area with infected livestock products, and human diseases. In the Republican Anti-Plague Station (RAPS) we have carried out an investigation of the soils from these high-risk points, in particular from the cattle burial sites, for the presence of anthrax spores. The choice of sites for soil collection was determined on the basis of the archival data from RAPS. All regions of the republic have been divided between the five Anti Plague Divisions (APDs) namely Mingachevir, Imishli, Khachmaz, Shamkir and Lenkoran. Samples of soils were collected by APDs and sent to RAPS for the analysis. Each APD collected 20 soil samples, thus the total number of samples equalled 100. Laboratory diagnostics was carried out in the Biosafety Level 2 (BSL 2) laboratory of RAPS by the bacteriological method, and confirmed by PCR. From the 100 samples, four cultures of *Bacillus anthracis* have been isolated. Two cultures were isolated from the soils collected by the Mingachevir APD at the cattle burial sites in the Gakh district (one of them from the village of Chalair and other from the site at Ingloy village). Two cultures were isolated by the Shamkir APD in the Shamkir district (one of them from the village of Seifeli and other from the village of Sabirkend). Considering active livestock development in these areas we recognize the necessity of carrying out continuous monitoring activities there. When anthrax spores are discovered in soils, we recommend large-scale soil disinfection and additional vaccination of animals.

Recent Publications

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4. Shikhaliyeva S T and Khalilova T A (2011) Application of natural zeolite «Azeomed» as an adsorbent of cytomegaloviruses. World Forum Natural Cataclysms & Global Problems of the Modern Civilization "GEOCATACLYSM-2011", 64-67.
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Biography

Sheyda Shikhaliyeva has completed her Biology Department of Azerbaijan State University (1993). She has completed her PhD from Azerbaijan State Post-Graduate Institute for Doctors named after A.Aliyev. She is the Deputy Director of Azerbaijan Republican Anti-Plague Station. She has published more than 30 papers in reputed journals and has been a Secretary of the Azerbaijan National Technical Group of Experts on Immunization (NTGEI).

sheydashikhaliyeva@gmail.com