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ZADANIA LABORATORIÓW MIKROBIOLOGICZNYCH W PRZYPADKU ATAKU BIOTERRORYSTYCZNEGO

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Role of microbiological laboratories in case of bioterroristic attack

Abstract: The threat of terrorists using biological warfare agents has received increased attention in recent years. Biological agents have been used as weapon for thousands of years to produce fear and harm in humans. They are invisible, silent, odorless, tasteless, easy to disperse and inexpensive to produce. In this article, the properties of the most important biological agents are presented. A short history of biological weapon usage, and its clinical aspects are described. Microbiology laboratories are considered to be the first lines of defense for recognision of biological agents during a possible terrorism event. In the USA, laboratories involved in preparedness to bioterrorism have been classified by CDC into four biosafety levels depending on their facilities and abilities. The paper focuses on the role of microbiology laboratory in preparation for and response to a bioterroristic event, clues indicating attack and identification methods of the most important biological agents. The microbiologists can provide a practical assessment of the biological weapons incident, consequently the best response to a terroristic incident could be undertaken, many lives saved, panic and crisis throughout the country avoided.

1. Introduction. 2. Short historical view on using of biological weapon. 3. Characterization of biological weapon. 4. The role of microbiological laboratories. 4.1. Clues of a biological weapon attack. 4.2. Biosafety in microbiological laboratories. 4.3. Organization of microbiological laboratory network in the USA. 4.4. Packing and shipping of infectious substances. 4.5. Laboratory security. 4.6. Identification of the most important biological weapon agents. 4.6.1. *B. anthracis*. 4.6.2. *Francisella tularensis*. 4.6.3. *Yersinia pestis*. 4.6.4. Variola virus. 4.6.5. Hemorrhagic fever viruses. 4.6.6. Botulinum toxin. 5. Summary

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