



## Pathology & Biology Section – 2005

### G41 Heightened Awareness of Bioterrorism: Three Cases of Unusual Skin Lesions

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Attendees will learn of the heightened awareness of bioterrorism since the terrorist attacks in 2001, and how this has raised the suspicion of law enforcement and medical personnel in evaluating skin lesions. The attendee will also learn the cutaneous manifestations of several bioterrorist agents.

This presentation will impact the forensic community and/or humanity by providing an increased understanding of how recent historical events involving terrorism and bioterrorism have affected the law enforcement and medical communities. They will gain an understanding through the case reports presented of how these events have increased the suspicion of bioterrorism when evaluating unusual skin lesions. They will increase their understanding of, and ability to recognize, the cutaneous manifestations of bioterrorist agents through the review of those agents.

The goal of this presentation is to discuss three cases of unusual skin lesions that presented in February of 2004, to the OCME in Baltimore, MD, and how the recent heightened awareness of bioterrorism affected the medical community and handling of these cases. In addition, skin lesions associated with bioterrorism will be reviewed.

Since the terrorist attacks on September 11, 2001, and the anthrax attacks that began two weeks later, there has been an increased awareness of possible terrorist and bioterrorist attacks throughout the United States. The media, in particular, has elevated this awareness not only with reports on the anthrax attack, but with reports of other possible agents that could be used in a bioterrorist attack, such as smallpox or plague. This increased awareness has lowered the threshold of the medical community in the suspicion of bioterrorist attack in the evaluation of skin lesions. The following three cases illustrate this heightened awareness and suspicion of bioterrorism, and also reinforce the role of the medical examiner in public health biosurveillance.

**Case Report:** A previously healthy 40-year-old Hispanic female had complained of rash and shortness of breath for one week. Her family found her on the floor and transported her to the Emergency Department. There she was noted to be asystolic, with fixed and dilated pupils and no respirations. Numerous crusted and scabbed lesions varying in size and stage of healing were noted on her face, torso, and extremities. The Emergency Department expressed concern about Varicella lesions other than Varicellazoster (chicken pox), and the body was sent to the medical examiner's office to rule out smallpox.

**Case Report:** A previously healthy 46-year-old white male was found facedown in the hallway of the lower level of his home. The residence was secure and the family entered the dwelling after not being able to reach him for several days. According to a coworker, several days earlier, the decedent said that he would be out of the office for a week after being diagnosed with a viral infection at a local walk-in clinic. At autopsy, multiple crusted ulcers on his head, chest, left upper thigh, and anterior aspect of the right leg were noted. There was also a crusted eschar noted on his abdomen, and multiple non-crusted necrotic ulcers on his right buttock, right posterior medial thigh, left axilla, back of the neck, lower lumbar spine, and left upper chest. Law enforcement officials expressed concern about possible cutaneous anthrax because the deceased was employed by the National Security Agency.

**Case Report:** A previously healthy 61-year-old Chinese female that reportedly arrived from China 20 days earlier collapsed in her bathroom. Her family, who called 911, heard the fall. Upon EMS arrival she was found to be asystolic and ACLS was initiated. She was pronounced dead upon arrival to the Emergency Department. While in China she had contracted a pruritic skin disease of unknown cause, and since her arrival had also reportedly felt weak and experienced a gradual decline in appetite. The disease started on her right arm and spread to the rest of her body. For

the three days prior to her death she was bedridden. At the hospital multiple skin lesions in various stages of healing ranging from bullae to ruptured bullae, raw erosions, dried erosions, crusted lesions, and hypopigmented scars were noted. The local health department expressed concern about possible bioterrorism.

The heightened awareness of bioterrorism has stimulated an increased response to unusual and aggressive appearing skin lesions among the medical and law enforcement communities. These three cases illustrate that response, and also provide examples of possible mimickers of bioterrorism for comparison to the cutaneous bioterrorist agents reviewed.

#### **Bioterrorism, Skin Lesions, Case Reports**