



## Pathology Biology Section – 2007

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### **G1 Sudden Unexpected Death in a Case of Human Immunodeficiency Virus (HIV) and Mycobacterium Infection Diagnosed Postmortem**

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After attending this presentation, attendees will learn: 1) Initial diagnosis of HIV/AIDS can be made postmortem by performing thorough histological examination and necessary laboratory tests, 2) Sudden death can occur in cases of unsuspected HIV/AIDS cases with non-tuberculous Mycobacterium infection in spleen and lymph nodes, 3) PCR technique is available for identifying Mycobacterium species in formalin-fixed paraffin-embedded tissues.

This presentation will impact the forensic community and/or humanity by assisting the forensic pathologists in better identifying HIV/AIDS cases at an early stage, so that it will benefit the immediate family and the community.

This 35-year-old female was found unresponsive at her residence at 6:00 pm. She was pronounced dead at emergency room after the usual resuscitative measures. She had a full-day work as a clerk stenographer and left work at 4:00 pm. She stated to her co-worker that she had chills while riding down on the elevator to leave work. She had a history of cervical carcinoma-in-situ that was treated with total hysterectomy and recently had laser vaporization for dysplasia of vaginal wall. She had been otherwise in good health. At autopsy the spleen was slightly enlarged and had gray nodules and there were skin ulcers in perineum. Microscopic examination of the spleen revealed ill-defined epithelioid cell granulomas containing rare acid-fast bacilli (AFB). Sections of mesenteric lymph nodes revealed lymphoid depletion and numerous AFB in ill-defined epithelioid cell granulomas. The skin ulcers were microscopically consistent with herpes simplex virus infection. In view of the presence of cervical carcinoma-situ, vaginal wall dysplasia, Mycobacterium infection, and herpes simplex skin infection, HIV-1 antibody tests (enzyme-linked immunosorbent assay and Western blot assay) were performed on a blood specimen taken at autopsy. Both tests were positive. Further investigation revealed that the decedent's brother had known that the decedent might have had HIV infection, because her ex-boyfriend had told him that she might have been infected with HIV. To identify Mycobacterium species the formalin-fixed paraffin-embedded tissues of mesenteric lymph nodes were sent to Central Arkansas VA Medical Center laboratory, where Mycobacterium tuberculosis DNA complex was not detected by use of polymerase chain reaction (PCR) assays. This case was reported as HIV/AIDS to NJ State since the diagnosis had not been made antemortem.

**HIV/AIDS, Sudden Death, Mycobacterium**