



H39 A Fatal Case of Histoplasmosis With Colonic Perforation in a Patient With Acquired Immune Deficiency Syndrome (AIDS)

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Learning Overview: The goal of this presentation is to introduce a case of extrapulmonary histoplasmosis in a patient with a postmortem diagnosis of AIDS.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by discussing an interesting presentation of an AIDS-defining illness postmortem. This presentation will also address the utility of obtaining serum at autopsy for postmortem testing.

Histoplasma capsulatum is a fungal organism most prevalent in the Ohio and Mississippi River Valleys. Humans are exposed to *Histoplasma* through the environment, especially soil contaminated with bird or bat droppings. Typical infections are pulmonary and self-limited, although immunocompromised patients are at risk for severe and potentially fatal infections. Histoplasmosis, extrapulmonary or disseminated, is an AIDS-defining illness.

The goal of this case presentation is to introduce a fatal case of disseminated histoplasmosis in a patient with undiagnosed AIDS. A 41-year-old male inmate with a past medical history of diabetes mellitus and hypertension was found unresponsive in his cell. Death was pronounced soon after discovery, and an autopsy was ordered. There was no evidence of foul play at the scene and the decedent had no significant mental health history. The autopsy was performed at the West Tennessee Regional Forensic Center in Memphis, TN.

External examination was unremarkable with no evidence of trauma. Internal examination revealed a fibrinous peritonitis associated with 350 milliliters of turbid ascites fluid. A colonic perforation was identified, distal to the splenic flexure, with extensive induration of the adjacent mesentery and retroperitoneal tissue. Additional findings at autopsy consisted of cardiomegaly and coronary artery atherosclerosis. Histologic examination of the colonic perforation site showed granulomatous inflammation with granulation tissue. Histologic examination of the liver revealed small periportal and intralobular granulomas with periportal-based mononuclear cell infiltrates. A Gomori Methamine Silver (GMS) stain was ordered and highlighted intracellular and extracellular organisms morphologically consistent with *Histoplasma* within the colon and liver sections.

The West Tennessee Regional Forensic Center in Memphis, N, attempts to collect blood from all decedents in a serum separator tube in the event postmortem serum testing is warranted. Blood may also be collected in Ethylenediaminetetraacetic Acid (EDTA) -containing tubes in select cases in the event molecular testing is indicated. Due to the extrapulmonary and disseminated nature of the decedent's infection combined with the lack of known predisposing risk factors, Human Immunodeficiency Virus (HIV) combined antibody and antigen testing on postmortem serum was ordered. The result of the combined testing was positive and identified to be HIV-1 by confirmatory antibody testing. The cause of death in this case was determined to be peritonitis secondary to colonic histoplasmosis with perforation. Given the positive postmortem HIV testing and that extrapulmonary histoplasmosis is an AIDS-defining illness, the underlying cause of death was certified as AIDS.

This case exhibits the importance of obtaining postmortem serum in the event additional laboratory testing is warranted secondary to findings at autopsy. The presence of extrapulmonary disease prompted postmortem testing to determine the HIV status in this case, also highlighting the importance of knowledge regarding AIDS-defining illnesses in postmortem evaluations.

Histoplasmosis, Human Immunodeficiency Virus, Colonic Perforation