G6 Immunocompromised Female, Age 67, With an Angioinvasive Pulmonary Fungal Abcess

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After attending this presentation, attendees will understand the vulnerability of the immunocompromised person to opportunistic organisms that may present unexpected autopsy findings and the necessity of a complete medical history.

This presentation will impact the forensic community and/or humanity by providing an added appreciation for a thorough medical history as an aid to correlate and make sense of unexpected autopsy findings in the immunocompromised.

This poster will present the autopsy of a 67-year-old Caucasian female with a longstanding history of hairy cell leukemia (HCL) refractory to chemotherapy in whom the pertinent autopsy findings included not only residual HCL, but also a large necrotic abcess within the right lung upper and lower lobes containing thrombus and angioinvasive fungal forms consistent with *Aspergillus* species.

The immunocompromised comprise a subset of the general population who are extremely susceptible to opportunistic organisms whether due to their primary disease process, medicines or therapies used to treat their underlying illness, or other medical conditions acting in concert with the above to render them extremely vulnerable to viruses, bacteria, fungi, and parasites.

This particular patient presented to the hospital after having low to moderate grade fever, nonproductive cough, and a sore throat for five days. After a workup revealed anemia, thrombocytopenia, leukopenia, and radiographic evidence of right lower lobe lung infiltrates, she was administered leukoreduced and irradiated packed red blood cells, a course of levofloxacin and erythropoetic drugs, and discharged.

She presented again eight days after her initial presentation complaining of persistent fevers, chills, an increase of coughing (now with pain), and pain on swallowing. She was admitted and made DNI/DNR. New imaging studies showed a mass lesion bridging the right upper lobe and superior segment of the right lower lobe suspicious clinically for acute infection vs. Leukemic infiltration. Despite administration of Zuosyn and Ambisone during her inpatient course, there was no improvement in her condition. After a bronchoscopy with BAL, which was positive for *C. albicans*, the patient required oxygen via nasal canula to maintain oxygen saturation above 94%.

On the morning of her death, the patient had episodes of hemoptysis with dark blood, then bright red blood. She emergently underwent repeat bronchoscopy, where it was noted that there was a right tracheal obstruction thought to be clot and tissue. Attempts to remove the obstruction were unsuccessful and the patient entered asystole.

Even though this particular case occurred in the setting of a tertiary care teaching hospital, people having conditions analogous to that of the decedent are often maintained on therapeutic drug regimens in outpatient settings and can present as cases of sudden unexpected death to medical examiner offices. It is not only important, therefore, for primary care givers to be sensitive to changes in the baseline health of their patients as these may be the heralds of opportunistic infection, but also crucial for those performing the postmortem to obtain a complete medical history including medicines used (and if applicable, chemotherapy and radiotherapy) and to keep opportunistic infections in their differential as to the mechanism of death.

Hairy Cell Leukemia, Aspergillus, Autopsy

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