



H1 An Autopsy Report: Death Secondary to a Widely Disseminated Invasive Scopulariopsis Infection

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After attending this presentation, attendees will be aware of this clinically rare fungus causing disseminated infection and death in an immunocompromised host. Attendees will know that apart from culture-based methods and morphology, there are additional molecular-based methods that are able to provide more exact identification of offending organisms. This presentation also provides an opportunity to add to the body of literature relating to this specific species.

This presentation will impact the forensic science community, in particular the general pathology community, by alerting them to the various options available to them for organism (in this case fungal) identification in cases of infectious death.

Introduction: *Microascus* species and their *Scopulariopsis* anamorphs are fungi common in the environment, but rarely associated with invasive disease. This report describes a case of disseminated infection caused by *Microascus cirrosus* and compares this case with those previously reported in the literature.

Case Report: A 46-year old woman developed graft versus host disease of the gastrointestinal tract and multiple episodes of bacterial sepsis following both autologous and allogeneic stem cell transplants for non-Hodgkin's lymphoma. The patient died after rapid onset respiratory failure. Postmortem examination showed multiple white-tan deposits associated with surrounding hemorrhage and tissue necrosis in the heart, right lung, bilateral kidneys, thyroid, lymph nodes, and brain. The histologic correlate to these gross findings was an invasive infection by a fungus with septate hyphae and associated with abscess formation and angioinvasion. Postmortem cultures from right lung tissues revealed a darkly pigmented *Scopulariopsis* species. Subsequent phenotypic analysis of the isolate cultured on cellulose agar demonstrated the characteristic ascocarp and ascospore morphology typical of *M. cirrosus*. Identification was confirmed by a 100% sequence similarity to the ex type strain of *M. cirrosus* UAMH 9389 using the D1D2 domain of the nuclear large subunit ribosomal DNA gene region.

Results: Thirty-five cases of invasive infection caused by *Microascus* (*Scopulariopsis*) species have been reported in the literature with three caused by *M. cirrosus*. The species in all three cases were identified by observation of the mature ascomata with two of the cases confirmed by sequencing of the LSU D1/D2 gene region. Similar to the present case, one of the prior cases was also characterized by the formation of fungal abscess in the tissues and angioinvasion in another case.

Conclusion: This report expands the conditions associated with invasive *Microascus* (*Scopulariopsis*) infection and provides an opportunity to describe methods that can be useful in species identification.

Scopulariopsis, Microascus, Fungal