appearing mucosa. For the 11 patients with colonic lesions visible on endoscopy biopsy samples were obtained from the site with the most severe lesions. Nucleic acids were prepared from intestinal biopsy specimens by means of classical methods. Detection of human cytomegalovirus (HCMV), HHV-6, and human herpesvirus-7 (HHV-7) DNA was done with PCR with use of specific primers followed by hybridization with oligonucleotidic probes. HHV-6 strains were identified as variant A or variant B by means of PCR with use of variant-specific primers and hybridization with variant-specific probes.

Of the 31 intestinal biopsy specimens tested, 15 (49%) tested positive for HCMV, 7 (23%) tested positive for HHV-6, and 22 (71%) tested positive for HHV-7 DNA (figure 1). The detection of any 1 virus was not significantly associated with the detection of any of the 2 others. The aspect of the colonic mucosa was normal in 20 patients (64.5%), erythematous in 7 (22.5%), and ulcerative in 4 (13%). There was no statistically significant association between the endoscopic aspect of the colonic mucosa and the detection of any virus. As in the publication from Amo et al. [1], all the HHV-6 strains detected were identified as variant B strains.

HCMV has been previously associated with diarrhea. The precise role played in this disease—in particular, when HCMV is absent—by the 2 closely related viruses HHV-6 and HHV-7 has to be explored, and this will require further studies. Moreover, the question of viral interactions between all 3 betaherpesviruses should also be addressed, given that such interactions have been observed in patients who have undergone renal transplantation [2, 3].

![Diagram showing virus DNA identified in colonic biopsy specimens from HIV-1–positive subjects with diarrhea. Data are no. (%) of patients. HCMV, human cytomegalovirus; HHV-6, human herpesvirus-6; HHV-7, human herpesvirus-7.](image)

**Figure 1.** Diagram showing virus DNA identified in colonic biopsy specimens from HIV-1–positive subjects with diarrhea. Data are no. (%) of patients. HCMV, human cytomegalovirus; HHV-6, human herpesvirus-6; HHV-7, human herpesvirus-7.

**References**


**Resolution of Fungemia Due to Fusarium Species in a Patient with Acute Leukemia Treated with Caspofungin**

SIR—Disseminated fungal infections due to Candida and Aspergillus species are a major cause of morbidity and mortality among patients with hematological malignancies. A number of less common opportunistic fungi are being isolated with increasing frequency as pathogens in hematologic patients, and *Fusarium* species are the most common of these [1]. Although in vitro susceptibility data suggest that most *Fusarium* isolates are resistant to amphotericin B [2], resolution of infection has been reported following treatment with amphotericin B exclusively among patients who ultimately recovered from myelosuppression. Amphotericin B currently remains the treatment of choice for such infections [1]. The echinocandins are a new antifungal drug class, and caspofungin acetate (Candida; Merck) is the first licenced member of this class. Caspofungin demonstrates activity against *Aspergillus fumigatus* in vitro [3] and is at least as effective as amphotericin B for the treatment of patients with candidemia [4], although it lacks in vitro activity against *Fusarium* species [5].

In this letter we describe a patient with recurrent acute myeloid leukemia (AML) who, during the course of treatment for

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**CORRESPONDENCE • CID 2003:36 (15 May) • 1349**

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AML, developed fungemia due to *Fusarium* species while receiving amphotericin B for neutropenic fever. The fungemia resolved with the administration of echinocandin caspofungin. We believe that this is the first reported case of fungemia due to *Fusarium* species that was treated successfully with caspofungin.

A 67-year-old man was admitted to our department with a third episode of recurrent AML. At admission, the patient was neutropenic (200 neutrophils/mm$^3$) and afebrile, with normal chest radiograph findings and a Karnofsky performance score of 90. He was given a standard cytotoxic regimen (aracynit, 100 mg/m$^2$ iv q.d. as a 24-h infusion on days 1–5 of treatment; idarubicin, 10 mg/m$^2$ iv bolus on days 1–3). Granulocyte colony-stimulating factor was administered at a dosage of 5 μg/kg q.d. as of day 6 of treatment until an absolute neutrophil count (ANC) of ≥500 neutrophils/mm$^3$ was achieved in at least 2 consecutive full blood counts.

On day 7, the patient developed neutropenic fever (temperature, 38°C). The fever was initially treated with ceftazidime and amikacin, and, on day 12, the patient was switched to a regimen of imipenem and vancomycin. This was followed by the addition of amphotericin B (1 mg/kg iv) to the regimen on day 15. Results of additional blood, urine, and sputum cultures were negative. A bone marrow aspiration sample obtained on day 15 was hypocellular and showed no evidence of disease.

On day 23, while continuously febrile, the patient developed a productive cough, and a chest radiograph revealed consolidation in the left upper lobe. *Pseudomonas aeruginosa* strains isolated from a sputum culture obtained on day 27 demonstrated resistance to imipenem, and, on the basis of the sensitivity report, the antibiotics in the patient’s regimen were switched to ceftazidime and amikacin. Although consecutive chest radiographs showed gradual improvement of the lung consolidation, the patient remained febrile (temperature, 39°C). *Fusarium* species were isolated within 72 h from cultures of 2 consecutive blood samples obtained on day 35.

On day 40, amphotericin B therapy was discontinued and caspofungin therapy was initiated. The patient was given a standard dose of 70 mg of caspofungin on day 40, followed by a course of 50 mg of caspofungin daily. *Fusarium* species strains were again isolated within 72 h from cultures of an additional 2 consecutive blood samples obtained on day 44. On day 47, the patient became afebrile and started reconstituting neutrophils (ANC, 300 neutrophils/mm$^3$), and an ANC of ≥1500 neutrophils/mm$^3$ was achieved on day 58. Caspofungin therapy was discontinued on day 61 and the patient was discharged. At this time the patient was afebrile and did not require blood transfusions, and had negative blood culture results, normal chest radiograph findings, and a normal neutrophil count.

Although the new echinocandin antifungal agent caspofungin lacks in vitro activity against *Fusarium* species [5], this case of successful caspofungin treatment of fungemia caused by *Fusarium* species raises questions about the true activity of antifungal agents in such situations and suggests that the recovery of myelosuppression, rather than the choice of antifungal agent, may ultimately determine the outcome of such cases. Further in vivo studies are warranted to determine the roles of amphotericin B and caspofungin in this clinical situation.

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**Pythium insidiosum: Reidentified as Gymnascella hyalinospora**

Sir—Amy M. Groeters, a veterinary internist at Louisiana State University (Baton Rouge) who fairly frequently encounters pythiosis in young dogs in the southeastern United States, questioned the identification of *Pythium insidiosum* as the fungus that caused endocarditis in a patient with leukemia who my colleagues and I described in an electronic article in *Clinical Infectious Diseases* [1]. The isolate, which had originally been sent to Michael G. Rinaldi at the University of Texas Health Science Center (San Antonio) for antifungal susceptibility testing, was subsequently correctly identified as *Gymnascella hyalinospora* by Dr. Groeters, Dr. Deanna A. Sutton, who works with Dr. Rinaldi, and Lynne Sigler (curator of the University of Alberta Microfungus Collection and Herbarium in Edmonton, Canada).

Correct identification was based on the organism’s morphological features, including good growth at both 30°C and 37°C, characteristic production of yellow and green tufts of aerial hyphae within which ascospores were produced, and...