

have a positive toxin, a positive culture, or both and can be symptomatic or asymptomatic. Not surprisingly, this makes interpretation of test results problematic, particularly in BMT patients, who can have diarrhea for a variety of reasons. Comprehensive infection control requires the institution of enteric precautions in patients with diarrhea or gastroenteritis, because these patients are more likely to contaminate the environment than asymptomatic patients.

Our report reinforces the view that close, ongoing surveillance can detect small outbreaks in a timely fashion, allowing intervention in order to limit nosocomial spread of the infection.

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## REFERENCES

1. Cartmill TD, Panigrahi H, Worsley MA, McCann DC, Nice CN, Keith E. Management and control of a large outbreak of diarrhoea due to *Clostridium difficile*. *J Hosp Infect* 1994;27:1-15.
2. Reinke CM, Messick CR. Update on *Clostridium difficile*-induced colitis, part 2. *Am J Hosp Pharm* 1994;51:1892-1901.
3. Milligan DW, Kelly JK. Pseudomembranous colitis in a leukaemia unit: a report of five fatal cases. *J Clin Pathol* 1979;32:1237-1243.
4. Samore MH, Venkataraman L, DeGirolami PC, Arbeit RD, Karchmer AW. Clinical and molecular epidemiology of sporadic and clustered cases of nosocomial *Clostridium difficile* diarrhea. *Am J Med* 1996;100:32-40.
5. Malamou-Ladas H, O'Farrell S, Nash JQ, Tabaqchali S. Isolation of *Clostridium difficile* from patients and the environment of hospital wards. *J Clin Pathol* 1983;36:88-92.
6. Brooks SE, Veal RO, Kramer M, Dore L, Schupf N, Adachi M. Reduction in the incidence of *Clostridium difficile*-associated diarrhea in an acute care hospital and a skilled nursing facility following replacement of electronic thermometers with single-use disposables. *Infect Control Hosp Epidemiol* 1992;13:98-103.
7. Nolan NP, Kelly CP, Humphreys JF, Cooney C, O'Connor R, Walsh TN, et al. An epidemic of pseudomembranous colitis: importance of person to person spread. *Gut* 1987;28:1467-1473.
8. Struelens MJ, Maas A, Nonhoff C, Deplano A, Rost F, Serruys E, et al. Control of nosocomial transmission of *Clostridium difficile* based on sporadic case surveillance. *Am J Med* 1991;91(suppl 3B):138S-144S.
9. Olson MM, Shanholtzer CJ, Lee JT Jr, Gerding DN. Ten years of prospective *Clostridium difficile*-associated disease surveillance and treatment at the Minneapolis VA Medical Center, 1982-1991. *Infect Control Hosp Epidemiol* 1994;15:371-381.
10. Rutala WA, Gergen MF, Weber DJ. Inactivation of *Clostridium difficile* spores by disinfectants. *Infect Control Hosp Epidemiol* 1993;14:36-39.

## Person-to-Person Spread of *Aspergillus*

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Pegues and colleagues from the CDC and the University of California Los Angeles Medical Center presented findings of an investigation of a cluster of three cases of *Aspergillus fumigatus* in a transplant ICU that may have involved person-to-person transmission.

The first patient developed a deep surgical-site organ-space infection in September 1998. The patient was in an open cubicle in an 11-bed transplant ICU. His abdominal wound was debrided, and wet-to-dry dressings were applied frequently during his ~4-week hospital stay. The patient ultimately succumbed to this infection; postmortem examination revealed disseminated aspergillosis. In October 1998, two patients in this ICU were diagnosed with invasive pulmonary *A fumigatus* infection.

To determine sources of *A fumi-*

*gatus*, the authors placed settling plates in the transplant ICU and performed air sampling before and after the index patient had wound dressing changes. They found low *Aspergillus* colony counts in the ICU before wound dressing changes, but marked increases in settling plate *Aspergillus* counts—up to 87 colonies per plate—immediately after wound dressing changes or wound debridement.

Molecular typing was performed on *Aspergillus* isolates from patient 1 and from the index patient on environmental isolates of *Aspergillus* and on isolates from patients 2 and 3. The index case, environmental, and patient 2 isolates showed similar-to-identical molecular typing. The high colony counts after wound dressing changes coupled with the molecular typing data led the authors to conclude that the process of wound dressing change and debridement of the index case led to aerosolization of *A fumigatus*, which then caused respiratory tract infection and pneumonia in at least one other

transplant patient. Because of high suspicion of potential person-to-person spread, patient 3 was treated aggressively and early with antifungal medication and survived. The index patient and patient 2 died of disseminated aspergillosis.

This is the first report of possible person-to-person transmission of *Aspergillus*. Debriding wounds infected with this organism may aerosolize spores, resulting in airborne transmission. The investigators noted that this study raises the questions of whether patients with *Aspergillus* wound infections, particularly when there is extensive exposed infected tissue, should be placed in negative-pressure isolation rooms.

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