data suggest that the expression of different O antigens in *E. coli*
from patient TB135 is not the result of plasmid-mediated serotype
conversion, the common electrophoretic type, H antigen, *eae* geno-
type, and patient origin of these organisms notwithstanding.

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References


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Prevention of Aspergillosis in Bone Marrow Transplantation

To the Editor—In the June 1997 issue of the *Journal*, Wald and coworkers provided a comprehensive, although retrospective, analysis of aspergillosis in recipients of bone marrow transplantation [1]. One of the conclusions of this interesting article was that the use of laminar air flow (LAF) rooms is protective against early, but not late, aspergillosis, during the transplant course. I think that this conclusion should be substantially modified because it is not adequately supported by the data presented.

First, in this article, the allocation of patients to either LAF or standard rooms was not randomized. Patients with aplastic anemia and those receiving grafts from unrelated donors were put in LAF rooms, but the allocation of other patients was left to the discretion of the attending physician. Clearly, this decision could have been biased by many factors, including the physician’s personal opinion about the usefulness of LAF rooms, the ability of the patient to accept this psychologically demanding situation, and the patient’s clinical conditions. Certain patients refuse to be put in an LAF room or are too sick to be cared for in such an environment.

Second, no information was provided about the criteria used to classify patients as “LAF” or “non-LAF.” How long should a patient stay in an LAF room to be considered an LAF room patient? For example, if a patient is taken out of an LAF room after only 3 days because of lack of compliance or deteriorating clinical conditions and then develops aspergillosis after another 15 days, is he considered an LAF or a non-LAF patient?

Third, probably due to the shortage of space, the authors did not describe the type of environment in which patients outside the LAF rooms were cared for. It would be important to know whether

or not these patients still were in a high efficiency particulate air (HEPA)–filtered environment. Indeed, in an LAF room, the patient not only breathes in air that is filtered through HEPA filters but also air that is forced in a laminar unidirectional pattern from one wall to the opposite one. In addition, to live in an LAF room means to live in a room that is equipped with sleeved gloves hanging from a plastic wall and to be kept in a “sterile” environment, which usually includes sterilization of every item entering the room, a sterile diet, skin disinfection, and so on. The reduction in the level of circulating spores seen in this environment, which is likely to be responsible for the reduction in the incidence of aspergillosis [2, 3], is unlikely to be affected either by the laminar flow or by the isolation and sterilization procedures, but rather by the air filtration through the HEPA filters [3]. One can use HEPA filters without laminar flow and other isolation procedures and still obtain a reduction in circulating spores (and consequently aspergillosis) [4].

In conclusion, even if the multivariable analysis showed that LAF rooms were associated with a reduced risk of early aspergillosis, it is unlikely that this benefit resulted from the use of the LAF room system as a whole, but rather by the air filtration through the HEPA filters. This point is extremely important because LAF rooms are uncomfortable for the patient and expensive for the health care system, as pointed out several years ago [5]. In my opinion, the use of LAF rooms in bone marrow transplant patients should not be encouraged without convincing data supporting their efficacy in the prevention of infection.

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References


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Reply

To the Editor—We appreciate the thoughtful comments of Viscoli [1] regarding our manuscript describing risk factors for *Aspergillus* infections in a cohort of patients undergoing bone marrow transplantation [2]. It is correct that the allocation of patients to