study, we stated that the presence of shock was evaluated "when the blood samples were obtained for culture (early shock)" [2, p. 194], which means before starting any antibiotic treatment. Under this condition, shock cannot vary by empirical therapy; thus, it should not be considered to be intermediate between the exposure to a given empirical antibiotic treatment (independent variable) and death (dependent variable) (fig 1 b). In addition, not adjusting for shock could lead to an incorrect conclusion if shock is not equally distributed among the different categories of the independent variable (therapeutic group), as it occurred with shock in our study (table 1 showed a different prevalence of shock among MIC groups and, therefore, among therapeutic groups). The importance of defining when shock is or is not an intermediate variable is clearer in the following example. Imagine a cohort of bactereemic patients in which most subjects with shock (early shock) are empirically treated with carbapenems while patients with less severe infection are treated with cefotaxime. Because shock is strongly associated with mortality, in the univariate analysis, the carbapenem group would have a higher mortality rate than would the cefotaxime group. If shock were not included in the multivariate model, treatment with carbapenems could be incorrectly considered to be a risk factor for mortality. In this instance, shock is not an intermediate variable, but it is a confounding variable.

Therefore, shock could be an intermediate variable or a confounding variable, depending on the independent variable being analyzed. We believe that not adjusting for shock in multivariate models that analyze the effect of empirical antibiotic therapy on mortality may lead to incorrect conclusions.

In their letter, Porath and Brooks [4] make some interesting comments. First, it is important to specify that the title of their letter is not accurate, because vancomycin MIC per se was not an independent predictor of mortality in MRSA bacteremia in our study [2]. It was a predictor in those patients empirically treated with vancomycin; therefore, it would be more correct to state that vancomycin MIC is a predictor of mortality in MRSA bacteremia empirically treated with vancomycin.

Porath and Brooks [4] indicate that heart failure was more frequent in patients with a vancomycin MIC of 2 μg/mL (P = .02, not P = .01 as shown in their letter), and they suggest that this factor would probably weigh into the category of "prognosis of underlying disease," which was associated with mortality. This information could lead to the impression that patients with a vancomycin MIC of 2 μg/mL were more severely ill; however, liver cirrhosis was more frequent in patients with a vancomycin MIC of 1 μg/mL (P = .01). In fact, the severity of comorbidities was evaluated using a well-recognized score (McCabe score), and there were no differences among MIC groups (P = .51). Although observational studies can never be as accurate as case-control studies in controlling for underlying diseases, it is our opinion that the prognosis of underlying disease cannot explain our finding about shock and mortality.

We appreciate the identification of a typographical error in the last paragraph of Results section, which should read "this was entirely because of the fact...had isolates with a vancomycin MIC of 1 μg/mL...than among those who had isolates with a vancomycin MIC of 2 μg/mL" (not 1 μg/mL as shown our original article [2, p. 197]). In addition, Porath and Brooks [4] ask about the percentage of patients who achieved a vancomycin serum trough concentration ≥ 10 μg/mL. In the Discussion section, we said, "The main drawback of the present study was the lack of information about serum vancomycin concentrations" [2, p. 199]. In fact, the serum vancomycin levels were obtained in only 25 patients, and for this reason, the information was not included. The mean ± SD of serum trough concentrations in those 25 patients was 15.15 ± 7.78 μg/mL.

The definition of confounding by indication is a bias that can arise in observational studies when patients with the worst prognosis are allocated preferentially to a particular treatment. Such patients are likely to be systematically different from those treated with another drug or those not treated. The aim of our study was to evaluate the efficacy of empirical vancomycin according to the vancomycin MIC. No other antibiotics were evaluated, because during the study period, there were no alternative therapies. Therefore, we consider there to be no confounding by indication bias in our study [2].

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Hospital Tap Water as a Source of Stenotrophomonas maltophilia Infection

To the Editor—Safdar and Rolston [1] provided an excellent review of Stenotro-
Stenotrophomonas maltophilia as an emerging pathogen of special interest and as a cause of substantial morbidity and mortality in immunocompromised individuals. As the authors noted, serious infections attributable to S. maltophilia have been reported in patients with cancer who lack recognized risk factors. Interestingly, S. maltophilia is among the heterotrophic plate count bacteria frequently found naturally in potable water [2]. In the face of the increase in rates of infection and antimicrobial resistance reviewed by Safdar and Rolston [1] and the imminent enforcement of federal legislation that will compel government reimbursement for specific health care-associated infections, protection of our most vulnerable immunocompromised patients by using filters suitable for application in the health care setting may be particularly prudent and cost-effective.

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