Linezolid Versus Vancomycin for Methicillin-Resistant Staphylococcus aureus Nosocomial Pneumonia: Controversy Continues

To the Editor—We read with great interest the article by Wunderink et al [1], a prospective trial demonstrating improved clinical and microbiological outcomes by using linezolid for treatment of methicillin-resistant Staphylococcus aureus (MRSA) nosocomial pneumonia compared with vancomycin. However, the study has a number of shortcomings in addition to the ones that the authors acknowledged in the article. Although the authors allege that vancomycin was dose optimized, more than half the patients who received vancomycin failed to achieve trough concentration >15 μg/mL on days 3 and 6, which was recommended in the latest guideline [2], and because median trough level at day 9 was 16.1 μg/mL, a substantial number of patients again failed to achieve recommended concentration. Likewise, median duration of treatment was 10 days in both arms (range, 2–22 days). Again, half the patients were treated with vancomycin with a duration <10 days, which may have compromised the outcomes. Although duration of treatment for MRSA pneumonia is stated as 7–21 days in the guideline [2], it is not based on high-quality clinical evidence and is instead based on expert opinions. A prestigious textbook suggests that the treatment duration should be 10–15 days in less complicated cases (and more in complicated cases); we fully agree with this recommendation [3]. Furthermore, the occurrence of myelosuppression, the most noted adverse effect of linezolid treatment, is time dependent [4], and longer duration of treatment commonly used for MRSA pneumonia could have affected its incidence.

Because the study did not demonstrate apparent benefit of linezolid on 60-day mortality, with the aforementioned shortcomings, we consider that the controversy of whether linezolid should be prioritized over vancomycin has not been resolved.

Note

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