Letters

COMMENT & RESPONSE

Are Procalcitonin Measures a Reliable Predictor of Stopping Antibiotics Among Patients With Sepsis?

To the Editor Although the ADAPT-Sepsis[1] multicenter randomized clinical trial (RCT) found that care guided by PCT measurement safely reduced antibiotic duration compared with standard care, several important considerations warrant further discussion.

First, although the study demonstrated a statistically significant reduction in antibiotic duration (from 10.7 to 9.8 days), the treatment period was longer than those reported in recent landmark trials. The Bacteremia Antibiotic Length Actually Needed for Clinical Effectiveness (BALANCE) trials[2] showed that 7 days of antibiotics was noninferior to 14 days for patients with bloodstream infections. Similarly, the Reducing Antibiotics Treatment Duration for Ventilator-Associated Pneumonia (REGARD-VAP) trial[3] found that individualized shortened antibiotic duration (median, 6 days) was noninferior to longer treatment (median, 14 days). The Study to Optimize Peritoneal Infection Therapy (STOP-IT) trial[4] further demonstrated that fixed-duration antibiotic therapy (approximately 4 days) yielded similar outcomes to longer courses for intra-abdominal infections. Compared with the findings of previous RCTs,[2-4] the treatment duration in the ADAPT-Sepsis was longer, suggesting need for further optimization of antibiotic stewardship strategies.

Second, this study[1] did not comprehensively assess the effect of multidrug-resistant organisms (MDROs). Patients with MDRO infections may require more complex antibiotic regimens, with initial treatments potentially adjusted based on susceptibility testing. Additionally, patients with fungemia require longer treatment durations than do those with bacterial infections. A stratified analysis accounting for these variables would be helpful.

Third, the study data suggested a slightly higher rate of infection relapse or recurrence in the PCT-guided treatment group compared with standard care (event number, 15; 1.2% [11 of 908] vs 5; 0.5% [5 of 913]). This difference, while small, merits further investigation to understand potential implications of biomarker-guided antibiotic duration.

Chi-Kuei Hsu, MD
Chih-Cheng Lai, MD

Author Affiliations: Department of Internal Medicine, E-Da Hospital, Kaohsiung, Taiwan (Hsu); Department of Intensive Care Medicine, Chi Mei Medical Center, Tainan, Taiwan (Lai).

Corresponding Author: Chih-Cheng Lai, MD, Department of Intensive Care Medicine, Chi Mei Medical Center, Tainan, Taiwan (dtmed141@gmail.com).

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