Meropenem-Vaborbactam (VAMBOMERE) vs. Best Available Therapy for Carbapenem-Resistant Enterobacteriaceae Infections in TANGO II: Outcomes in Immunocompromised Patients

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Abstract

Background

Immunocompromised patients are at high risk for mortality due to carbapenem-resistant Enterobacteriaceae (CRE) infections. Meropenem-vaborbactam (M-V) is a novel cyclic boronic acid beta-lactamase inhibitor combination developed for the treatment of serious gram-negative infections, including CRE. The present analysis reports outcomes among immunocompromised subjects in TANGO II, a randomized, open-label, phase 3 study evaluating M-V (2g/2g every 8h) vs. Best Available Therapy (BAT) for advanced CRE infections (those with confirmed cUTI/AP, HABP/VABP, bacteremia, or cIAI).

Methods

Eligible subjects were randomized 2:1 to M-V (2g/2g every 8h) or BAT for 7 to 14 days. BAT included the following antimicrobials: Meropenem (≤24h), colistin, cefepime, or ceftazidime-piperacillin therapy. Clinical cure was defined as patients with no signs or symptoms of any further antimicrobial therapy required.

Results

Of the 51 subjects with a baseline CRE pathogen (microbiological modified intent-to-treat (mMITT) population), 43 were immunocompromised (4 leukemia/lymphoma, 5 solid organ, 5 bone marrow/stem cell transplants, 7 chronic infections, or cIAI). Clinical cure was achieved in 30 (70.3%) in M-V vs. 19 (44.2%) in BAT (difference: 26.1%, 95% CI 4.0% to 47.5%, P=.01). All-cause mortality at 28 days was higher for those in the M-V arm compared to the BAT arm (38.9% vs. 27.8%, 11.1% difference, 95% CI 0.0% to 21.7%, P=.05). M-V was associated with fewer drug-related adverse events (30.8% vs. 40.0%), serious adverse events (38.5% vs. 50.0%), and study discontinuations due to TEAEs (15.4% vs. 30.0%) and renal-related AEs (7.7% vs. 40.0%) (Table 3).

Conclusions

Meropenem-vaborbactam compared to the best available therapy was superior in clinical outcomes and safety in the immunocompromised patients with CRE in TANGO II.

References