

Meropenem and Vaborbactam (Vabomere™)

IV Only

Use requires formal ID Consult

Carbapenem and beta-lactamase inhibitor antibiotic combination with FDA-approval for patients ≥18 years old with complicated urinary tract infections including pyelonephritis caused by proven susceptible bacteria

Activity: Coverage against many resistant gram negatives such as Enterobacteriaceae and *Pseudomonas aeruginosa*, including some CREs, KPCs and some ESBLs (e.g. CTX-M)^{1,2}

NOT ACTIVE against certain carbapenemases including MBLs (e.g. NDM, VIM) and/or oxacillinases (e.g. OXA-48, OXA-163)

Criteria for use:

- Treatment of complicated urinary tract infections including pyelonephritis caused by MDR gram negative organisms, when unable to use any other agents

Unacceptable Uses:

- Empiric use without confirmed susceptibility
- Treatment of complicated urinary tract infections when other agents are available
- Known serious hypersensitivity to meropenem, vaborbactam or to other members of the carbapenem drug class
- Concomitantly with valproic acid or divalproex sodium due to increased risk of breakthrough seizures due to significant reduction in valproic acid concentrations

Dosing in Adults:

- Standard dose: 4 gm (2 gm meropenem and 2 gm vaborbactam) IV over 3H Q8H for 14 days
- Renal impairment dose adjustment for those with eGFR<50mL/min/1.73m²
 - eGFR 30-49: 2gm Q8H
 - eGFR 15-29: 2gm Q12H
 - eGFR <15: 1gm Q12H
 - Hemodialysis: Adjust for renal function (e.g. 1gm Q12H). Give nearest dose after dialysis.

Monitoring:

- SCr/BUN, CBC with differential at baseline and daily

Considerations for Use:²

- Seizures and other adverse central nervous system (CNS) effects (e.g. delirium and/or headaches) have been reported in patients taking meropenem, a component of Vabomere™. Use with caution and monitor patients already diagnosed with a CNS disorder (e.g. history of seizures)
- May have role in treatment of other infections caused by MDR gram-negative organisms. ID team must be consulted for all potential on and off label use.

H= hour(s); ID= infectious diseases; Q= every; IV= Intravenous; eGFR= estimated glomerular filtration rate; CNS= central nervous system; gm= gram(s); mL= milliliters; min= minute(s); m= meters; KPC= *Klebsiella pneumoniae* carbapenemase producer; ESBL= extended-spectrum beta-lactamase producer; MBL= Metallo-beta-lactamase producer; MDR= multidrug resistant; CRE= carbapenem resistant Enterobacteriaceae; FDA= Food and Drug Administration; SCr= serum creatinine; BUN= blood urea nitrogen; CBC= complete blood count

References:

1. Castanheira M, Huband MD, Mendes RE, et al. Meropenem-vaborbactam tested against contemporary gram-negative isolates collected worldwide during 2014, including carbapenem-resistant, KPC-producing, multidrug-resistant, and extensively drug-resistant *enterobacteriaceae*. *Antimicrob Agents Chemother* 2017; 61(9):1-12.
2. Vabomere (Meropenem and Vaborbactam) [package insert]. The Medicines Company; Parsippany (NJ): August 2017.