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Vancomycin-resistant enterococcal urinary tract infections.

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Abstract

Enterococci are a common cause of urinary tract infections (UTIs) among hospitalized patients. The rising prevalence of vancomycin-resistant enterococci (VRE) is of particular concern within many institutions because of its association with increased mortality and health care costs, as well as limited treatment options. Clinicians need to differentiate between VRE-associated urinary colonization, asymptomatic bacteriuria, and UTIs in order to determine the need for treatment, optimal therapeutic options, and length of therapy. Unnecessary use of antibiotics in patients simply colonized and not infected with VRE in the urine has become a large problem in both hospitals and long-term care facilities. A PubMed-MEDLINE search was conducted to identify all English-language literature published between January 1975 and March 2010 in order to summarize diagnostic criteria and treatment options for VRE UTIs. Several antimicrobials are discussed, with the specific focus on those with the potential to treat VRE UTIs and susceptibility patterns of VRE from urinary sources: ampicillin, amoxicillin, daptomycin, doxycycline, fosfomycin, imipenem-cilastatin, linezolid, nitrofurantoin, penicillin, piperacillin, quinupristin-dalfopristin, tetracycline, and tigecycline. Recommendations for empiric treatment of enterococcal UTIs and definitive treatment of VRE UTIs, including an evidence-based treatment algorithm, are proposed. Ampicillin generally is considered the drug of choice for ampicillin-susceptible enterococcal UTIs, including VRE. Nitrofurantoin, fosfomycin, and doxycycline have intrinsic activity against enterococci, including VRE, and are possible oral options for VRE cystitis. Linezolid and daptomycin should be reserved for confirmed or suspected upper and/or bacteremic VRE UTIs among ampicillin-resistant strains. Use of other antimicrobials, such as quinupristin-dalfopristin and tigecycline, should be evaluated on a case-by-case basis due to concerns of toxicity, resistance, and insufficient supportive data. Additional clinical data are needed to determine the optimal management and duration of therapy for VRE UTIs.

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