Reviewer's report

**Title:** Use of daptomycin in the treatment of vancomycin-resistant enterococcal urinary tract infections: a short case series

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**Reviewer:** George Alangaden

**Reviewer's report:**

Manuscript review

Use of daptomycin in the treatment of vancomycin-resistant enterococcal urinary tract infections (UTI): a short case series

**General Comments:**

The authors describe their experience in using daptomycin for the treatment of symptomatic UTIs caused by vancomycin-resistant enterococcus (VRE) in 10 hospitalized patients. The patients were identified over a 3 year period. Daptomycin was administered in doses ranging from 5mg/kg q 24hr to 8mg/kg q 24hr for the treatment of VRE UTI. Duration of therapy was generally 3 days. All patients had resolution of symptoms and eradication of VRE noted at completion of therapy.

The study adds to the limited literature on the use of daptomycin for VRE UTIs. However there are certain questions that the authors need to respond to before a decision can be made on publication. These are noted below.

**Specific Comments:**

1. **Background:** In the interest of antibiotic stewardship the therapeutic options listed for the treatment of VRE UTIs mention should include nitrofurantoin and fosfomycin (for cystitis), doxycycline for (cystitis and pyelonephritis) and strains of VRE may be remain susceptible to ampicillin.

   The MIC90 of VRE (E faecalis and E. faecium) and the CLSI resistance breakpoint when discussing susceptibility of daptomycin.

   (The state our objective is to offer …..infection control challenge is unclear and should be deleted).

2. **Methods:**

   Why was informed consent obtained from subjects for a retrospective study?

   The inclusion criteria should be all VRE-symptomatic UTI treated with daptomycin, as the 20 patients with VRE-UTI not included because ID was not consulted did not receive daptomycin.
Definition:
Pyuria is generally defined as >10 WBC/HPF

The urinary symptoms should be listed and it would be essential to classify symptomatic UTIs as a) either cystitis or pyelonephritis (upper tract disease) or b) else as complicated versus uncomplicated. This is important due to the potential overuse of agents such as daptomycin and linezolid for cystitis/uncomplicated UTIs. The duration of therapy of 3 days suggests most patients had cystitis. This should be clearly stated.

Duration of follow-up should be stated, especially since on page 7 the statement is made that “no relapse was noted for 2 years.” How was this monitored? It would be better to utilize end-of-therapy resolution of symptoms and microbiological eradication as the objective endpoints.

Results:
Table 1: State the criteria used to stage kidney disease (1-5).

Table 2: State when were the urine cultures done post treatment?

In the 3 patients with indwelling urinary catheter were the catheters discontinued or exchanged?

The statement on relapse should be deleted or justified see above comment on follow up.

Discussion:

Should be more focused on the results. First 2 paragraphs could be omitted.

The MICs of daptomycin to E. faecalis and E. faecium and the breakpoints should be stated.

The discussion should focus on and include a more detailed comparison of the study with the other 2 studies of daptomycin use in VRE-UTI (references 12, 13). This is important to understand the population studied, endpoints, doses of daptomycin, etc. For instance reference 12 included 22 patients with complicated VRE-UTIs and used doses of 4mg/kg whereas reference 13 used even lower doses.

Limitations of the study should be stated

Abstract:

Methods: Inclusion criteria should include symptomatic VRE_UTIs and treatment with daptomycin.

End point of clinical resolution of symptoms is missing
Results: should be specific such as number of patients with CKD, Foleys, etc rather than general statements.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare that I have no competing interests