Reviewer's report

Title: High-dose daptomycin and fosfomycin treatment of a patient with endocarditis caused by daptomycin-nonsusceptible Staphylococcus aureus: Case report

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Reviewer: Jose M Miro

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The authors present a case report of implantable cardioverter defibrillator (ICD) device-related endocarditis caused by a methicillin-resistant Staphylococcus aureus (MRSA) strain that developed resistance to daptomycin and was cured with the combination of high-dose of daptomycin plus fosfomycin plus device removal.

Comments:

1.- Authors should explain what was the rational to use the combination of daptomycin plus fosfomycin to treat a case of ICD device-related MRSA endocarditis after daptomycin failure with a non-susceptible daptomycin strain. It would be interesting to perform time-killing curves in order to check if there was synergy. They should also provide appropriate references.

2.- Pacemaker and ICD device-related staphylococcal endocarditis must be always treated with the combination of antibiotics plus surgery (generator plus lead removal). Authors should include the following reference: Del Rio A et al. Chest. 2003 Oct;124(4):1451-9. It is possible that with daptomycin alone the patient could have been cured in the first attempt if the removal of the ICD lead had been performed.

3.- The term “prosthesis-related” endocarditis is confusing. Please, replace it by ICD device-related endocarditis in all the manuscript.

4.- The daptomycin dose approved by the FDA and the EMEA for treating SAB and endocarditis is 6 mg/kg/day.

5.- What was the rational to combine vancomycin and linezolid. This is a well known antagonistic combination.

6.- Please, explain in detail the doses and duration of all antibiotics given and the duration of bacteremia (number of positive blood cultures/number of blood cultures performed).

7.- Authors should discuss a recent publication done by Steed ME, et al. Antimicrob Agents Chemother. 2010 Dec;54(12):5187-92 because they studied novel daptomycin combinations against daptomycin-nonsusceptible MRSA in an in vitro model of simulated endocardial vegetations. They found that the
combination of daptomycin plus cotrimoxazol was bactericidal.