Reviewer's report

Title: Daptomycin Therapy for Osteomyelitis: A Retrospective Study

Version: 1 Date: 9 January 2012

Reviewer: Abhay Dhand

Reviewer's report:

This study addresses an important knowledge gap in the long-term use of daptomycin for chronic infections like osteomyelitis and measures clinical and safety outcomes.

Major limitations regarding clinical outcomes:

1. Diagnosis- there is a lack of uniformity in making/confirming a diagnosis of osteomyelitis. Only 56/71 pts had radiologically confirmed osteo. While culture data was available from at least 52 pts., it was used in only 29 pts. to confirm the diagnosis of osteo.

2. Clinical outcome: unclear what the relevance of clinical outcome in pts. with either gram negative infection, culture negative infection and/or in pts. where osteo was confirmed neither radiologically nor microbiologically.

3. Only 28/71(39%) pts. were treated with daptomycin alone, so the significance or the role of a broad spectrum concomitant antibiotic in curing osteo. becomes unclear.

4. Definition of clinical response: one of the definitions (infection cleared with a negative culture result) will be virtually impossible in these patients.

5. Lack of uniform/standard definitions in this study leads to a result where daptomycin dosage of 4 mg/kg vs. higher does not affect the rate of clinical failure. This could be potentially misleading in future treatment of pts. with serious MRSA infections.

This study can be more clinically relevant if the clinical outcome data is limited to patients where the diagnosis of osteomyelitis has been uniformly confirmed and where microbiological data shows susceptibility of the organism to daptomycin and other confounding factors like concomitant antibiotics are excluded. This may decrease the total number of patients, but the results will be clinically relevant and meaningful.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

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

Served on speakers bureau and received honoraria from Cubist and Pfizer.