Correspondence

Aortic root abscess caused by multidrug-resistant *Acinetobacter baumannii* and treated with medical therapy only: A case report

**KEYWORDS**
Acinetobacter; Aortic root abscess; Mediastinitis

**Dear Editor,**

Aortic root abscess is a rare and catastrophic complication of endocarditis. Despite improving the clinical outcome, surgical debridement is associated with significant perioperative risk. We reported here a patient with aortic root abscess with multidrug-resistant *Acinetobacter baumannii* (MDRAB) infection, who was surgically ineligible and had been successfully medical treated alone.

A 42-year-old man without systemic illness was diagnosed with methicillin-sensitive *Staphylococcus aureus* (MSSA) related endocarditis and received aortic valve replacement (AVR) with bioprosthesis, followed by parenteral oxacillin for 8 weeks. One month later, he was admitted twice due to post-operative mediastinitis. Cultures of peripheral blood and pus from sternotomy wound all yielded MDRAB. The isolates were only sensitive to colistin methanesulfonate (CMS). Surgical debridement was performed, followed by intravenous antibiotics. CMS plus meropenem for 6 weeks were administered during the first hospitalization. In the second hospital stay, CMS plus tigecycline were used initially, which were later changed to CMS and meropenem due to tigecycline-related vomiting for a total of 8 weeks.

Unfortunately, 2 weeks after the discontinuation of antibiotics, fever recurred and blood cultures grew MDRAB again with identical sensitivity. Single photon emission computed tomography (SPECT) using Gallium-67 citrate revealed Gallium-avid lesions over mid-sternum, aortic root, replaced aortic valve, and perivalvular region (Fig. 1B and C). Electrocardiography (ECG)-gated contrasted cardiac computed tomography (CT) confirmed hypodense lesions near the aortic root with rim-enhancement, suggesting prosthetic ARA (Fig. 1A). Bentall procedure was indicated but he declined because of the perioperative risk.

After CMS plus meropenem for 2 weeks, the blood culture became sterile. Six weeks later, ECG-gated CT (Fig. 1D) disclosed decreased size of prosthetic ARA and Gallium-67 scintigraphy showed total resolution of prior uptake (Fig. 1E and F). Until April 2017, he had received 12 months of CMS and meropenem without recurrent fever. The total duration of treatment will be guided by inflammatory markers and diagnostic images.

*A. baumannii* is an important nosocomial pathogen in Taiwan and is frequently associated with post-operative infection. Only one report of *A. baumannii* related ARA has been reported, and that patient survived after surgery. Currently there was no consensus about treatment of MDRAB-related ARA. The surveillance study in Taiwan had revealed excellent in-vitro activity of CMS against *A. baumannii* isolates. Tigecycline-imipenen combination has also revealed synergism or additivity in in-vitro study. Clinically, Cheng et al. found combination with CMS and carbapenem is associated with a lower mortality compared with CMS plus tigecycline in treating MDRAB bacteremia, if the MIC of tigecycline was greater than 2 μg/mL. Therefore, we treated our patient with CMS and carbapenem.

http://dx.doi.org/10.1016/j.jmii.2017.07.010

1684-1182/© 2017, Taiwan Society of Microbiology. Published by Elsevier Taiwan LLC. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).
In conclusion, we reported a rare case of successful medical treatment of MDRAB associated prosthetic ARA. The response was good given the subsequent sterile blood cultures and improvement on the diagnostic images. We consider CMS with meropenem would be the combination of choice. Tigecycline might be a reasonable alternative to meropenem if the MIC was not larger than 2 μg/mL. For patients who were deemed inoperable, prolonged antimicrobial therapy is important for a successful treatment.

References