Daptomycin in the management of cardiovascular implantable device infections

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Infection related to cardiovascular implantable devices is a serious complication, necessitating removal of the device and prolonged parenteral antibiotic therapy. Accurate diagnosis and optimal management of these infections are challenging.

Although inflammatory signs at the generator pocket of cardiovascular implantable electronic devices (CIED) or driveline/pump in ventricular assist device (VAD) systems are the most common presentation of an infection occurring soon after the device is implanted, positive blood cultures may be the sole manifestation of a late-onset endovascular infection.

Staphylococcal species cause the bulk of infections and account for 60% to 80% of cases in most reported series. A variety of coagulase-negative *Staphylococcus* (CoNS) species have been described to cause infections. CoNS is well recognized as a common cause of microbiological specimen contamination, and thus, repeated isolation of the same species of CoNS with an identical antibiotic susceptibility pattern is desired to support its role as an etiologic agent in device-related infections. Polymicrobial infection sometimes involves more than 1 species of CoNS. *Corynebacterium* species, *Propionibacterium acnes*, Gram-negative bacilli including *Pseudomonas aeruginosa*, and *Candida* species account for a minority of infections. Fungi other than *Candida* and nontuberculosis mycobacteria are rarely identified as pathogens in CIED infection, however, they are more frequently isolated in VAD infections.

We report about our favorable findings and outcome with daptomycin in the management of cardiac implantable device infections compared to standard antimicrobial agents like vancomycin or oxacillin.