

Rapidly Growing Mycobacteria (RGM) And Pacemaker Infection

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Introduction

- Infection rates of pacemakers and defibrillators range from 1% to 7%.
- RGM known as *M. fortuitum*, *M. abscessus*, *M. chelonae* are uncommon pathogens of pacemaker infection.

Case Presentation

- A 68-year-old male with dilated cardiomyopathy s/p defibrillator placement 3 years prior was admitted with a five-month history of fever, chills, and myalgias.
- Outside records:
 - Blood culture positive for *M. fortuitum*, 5 months prior
- On admission:
 - BP: 93/53 mmHg
 - No focal signs of infection of generator pocket
 - WBC: 4900 / μ l
 - Hb: 10.1 g/dl
 - Platelets: 83000/ μ l
 - Blood culture grew *M. fortuitum*
- Device infection was suspected.
- Defibrillator was removed and a temporary pacemaker placed.
- Defibrillator leads grew *M. fortuitum*.
- Therapy started with amikacin 10mg/kg IV daily, cefoxitin 2 grams IV q 8 hours, and Levaquin 750 mg IV daily.
- Blood culture was negative after one week of therapy.



Mycobacterium Fortuitum
Blood Agar



Mycobacterium Fortuitum
Scanning Electron Micrograph

Discussion

- RGM are ubiquitous in the environment and have an indolent disease course.
- It shows clinical signs after trauma or surgery.
- Disseminated disease is seen in immuno-compromised patients.
- Review of the English literature revealed 5 cases of RGM pacemaker infection.
- Infections are mainly nosocomial (within 6 months), but delayed onset was also reported (>1 year).
- Suspect infection in patients with implanted cardiovascular devices even with absence of localized signs of infection on the generator site.
- Optimal treatment is removal of all device hardware, with empirical antibiotics until susceptibility results.
- RGM are in general susceptible to amikacin, fluoroquinolones, cefoxitin and linezolid
- The duration of therapy is 6 to 12 months.

Take Home Messages

- Suspect device infection in patients with positive blood culture for RGM even in the absence of pocket inflammation.
- Removal of hardware is crucial for curative therapy.
- Start empiric IV antibiotics until susceptibility testing is available.

References

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