A RARE CASE OF CORYNEBACTERIUM STRIATUM ENDOCARDITIS IN A PATIENT WITH NATIVE RHEUMATIC MITRAL STENOSIS

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Case Vignettes

Introduction: Corynebacterium species are often considered contaminants when isolated in clinical specimens. However, over the last decade, this species has been recognized as an emerging pathogen causing bacteremia, endocarditis, and other serious infections. Corynebacterium endocarditis is rare, with most cases being reported in prosthetic valves. We present a case of Corynebacterium striatum bacteremia secondary to infective endocarditis (IE) in a native rheumatic mitral valve.

Case Report: An 83-year-old female with a significant cardiac history including atrial fibrillation, aortic stenosis status post surgical aortic valve replacement (SAVR) and transcatheter aortic valve replacement (TAVR), rheumatic mitral stenosis, severe tricuspid regurgitation, heart failure with preserved ejection fraction, sinus node dysfunction status post pacemaker placement, presented with worsening bilateral lower extremity edema. The patient was admitted with acute on chronic diastolic heart failure, and on admission met SIRS criteria along with hypoxia and lactic acidosis. Physical examination was remarkable for diminished lung sounds bilaterally, a systolic murmur graded 3/6, 2+ bilateral lower extremity pitting edema with an ulceration on the left lower extremity that did not appear infected. EKG showed atrial paced complexes with right bundle branch block, unchanged from prior studies. Chest x-ray showed moderate left and small right-sided pleural effusions with no evidence of consolidation or infiltration. Urinalysis was unremarkable. Initially, no clear source of infection was identified and the patient was monitored off antibiotics. Blood cultures from admission subsequently grew gram-positive rods, which later on admission speciatied as Corynbactrium striatum. This was initially thought to be a contaminant, but further workup was pursued given persistent bacteremia, and the patient was started on IV vancomycin. A 2-D echocardiogram showed a normally functioning bioprosthetic valve with no evidence of vegetations. A transesophageal echocardiogram was obtained which revealed extensive vegetations on the anterior mitral valve leaflet. Unfortunately, the patient was a poor surgical candidate. She was continued on intravenous vancomycin for 6 weeks with subsequent clearance of bacteremia.

Discussion: Corynebacterium species are aerobic, gram-positive rods that are often dismissed as ‘contaminants’ when isolated from blood cultures as this species is part of the normal flora on skin and mucosa in humans. This case is unique as the patient was found to have corynebacterium stratium IE of her native rheumatic mitral valve, although she had a more susceptible bioprosthetic aortic valve. Non-diphtherial corynebacteria have been acknowledged as rare but important pathogens causing IE and contribute to 9% of early and 4% of late prosthetic valve endocarditis, but only 0.2–0.4% of cases of native valve endocarditis. This case highlights the importance of including endocarditis in the differential diagnosis in patients with bacteremia secondary to non-diphtheria corynebacteria, even in the absence of prosthetic valves.