

WHEN MYCOBACTERIUM ABSCESSUS STRIKES: WHEN BACTEREMIA MEETS VERTEBRAL OSTEOMYELITIS

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INTRODUCTION

Mycobacterium abscessus is a rapidly growing nontuberculous mycobacterium that can cause a wide range of infections in humans, including skin and soft tissue infections, respiratory infections, and bloodstream infections. Although rare, bacteremia and vertebral osteomyelitis is a serious and debilitating manifestations of this infection that can result in significant morbidity and mortality.

CASE DESCRIPTION

In this case report, we present the case of a 68-year-old woman with a background history of diabetes, hypertension, and end-stage renal failure who presented with bilateral thigh pain and fever. Four months prior to her current presentation, the patient was hospitalized for a catheter-related bloodstream infection caused by Mycobacterium abscessus. The infection was successfully managed by removing the catheter and administering a combination of antimicrobial therapy consisting of Tienem, Azithromycin, and Amikacin. A CT scan was performed, which did not reveal any abnormal foci, and surveillance cultures were negative, indicating successful treatment of the infection at that time. However, repeated blood cultures during her current admission were positive for Mycobacterium abscessus, suggestive of relapse. Further investigations, including magnetic resonance imaging of her spine, revealed spondylitis of the L3 and L4 vertebrae, and a biopsy confirmed the presence of Mycobacterium abscessus. The patient is currently being treated with a combination of Amikacin, Tigecycline, and Azithromycin, with planned serial imaging to monitor her response to treatment.



Figure 1: Smooth Mycobacterium abscessus colonies on a sheep blood agar plate.



Figure 2: Mycobacterium abscessus growing on Lowenstein-Jensen medium. The cream coloured and waxy colonies set M. abscessus and other nonchromogenic nontuberculous mycobacteria clearly apart from M. tuberculosis, which grows as white and drier, cauliflower-shaped colonies.

DISCUSSION

Diagnosing and treating Mycobacterium abscessus bacteremia with vertebral osteomyelitis present several challenges, particularly in patients with a history of chronic medical conditions. In terms of diagnostic challenges, Mycobacterium abscessus infections can be difficult to identify due to their fastidious nature and similarities to other mycobacterial species. The importance of early detection and appropriate management cannot be overstated, as delays in treatment can lead to severe complications. Continuous surveillance and monitoring are crucial to prevent relapse and ensure a favorable outcome. Clinicians should maintain a high index of suspicion for relapse, especially in patients with a prior history of Mycobacterium abscessus infection. The treatment of Mycobacterium abscessus infections is complex and often requires a multidrug regimen tailored to the susceptibility profile of the isolated strain. Additionally, addressing and managing underlying chronic medical conditions, such as diabetes and hypertension, can contribute to overall treatment success and reduce the risk of recurrent infections.

CONCLUSION

This case highlights the challenges in diagnosing and treating Mycobacterium abscessus bacteremia with vertebral osteomyelitis, particularly in patients with a history of chronic medical conditions. It emphasizes the importance of early detection and appropriate management to achieve a favorable outcome, as well as the need for continued surveillance and monitoring to prevent recurrence of the infection. Clinicians should be vigilant for the possibility of relapse, especially in patients with a history of Mycobacterium abscessus infection.