

***Mycobacterium abscessus* Complex Catheter Related Blood Stream Infection (CRBSI) – A rare presentation**

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ABSTRACT

Introduction: Nontuberculous mycobacteria (NTM) bloodstream infection (BSI) is relatively rare. Among the rapidly growing mycobacteria (RGM), *Mycobacterium abscessus* complex (MABC) is considered the most pathogenic of this group of pathogens. The most common source of blood stream infection among NTM is intravascular catheter, however, the majority of MABC BSI originated from skin and soft tissue infection. **Case report:** A 36-year-old Malay man with ESRE, presented to district hospital with fever and pus discharges from internal jugular catheter (IJC) site for 1 week duration and fluid overload symptoms. His chest radiograph revealed overload features and loculated right pleural effusion. Preliminary report from both central and peripheral line blood culture (differential positivity of >2 hours) were Acid Fast Bacilli (AFB) isolated as there were no growth on routine culture media. Infective screening was non-reactive and sputum for AFB were negative. Patient was started on anti-TB regime and treated as TB CRBSI while waiting for full identification and susceptible report from National Health Laboratory. Anti-TB regime was changed to NTM regime as patient condition worsen after almost 3 weeks of treatment. Repeated blood culture in HRPZ shows persistent *Mycobacterium abscessus* complex. Tiny translucent colonies appeared on blood agar, gram-positive branching filaments, which further identified by of matrix-assisted laser desorption ionization-time of flight mass spectrometry (MALDI-TOF MS) as *Mycobacterium abscessus* complex. The isolate was susceptible to clarithromycin and amikacin, and resistant to trimethoprim-sulfamethoxazole, moxifloxacin, doxycycline, Imipenem, and tobramycin. **Discussion:** Nontuberculous mycobacteria (NTM) should be suspected in non-responding to anti-tuberculous treatment. Particularly, if the patient presented with non-respiratory symptoms while a central catheter was in place. Even though bloodstream infections-NTM are typically observed in immunocompromised patients with underlying malignancies or HIV, catheters in situ pose a risk as they can form biofilms and more resistant to disinfectants and sterilizing agents. NTM should be suspected in the background immunocompromised and presence of intravascular catheter, especially in non-responding to treatment.