

中文題目：Linezolid 作為附加抗生素於治療抗伽瑪干擾素自體抗體疾病患者瀰漫性 *Mycobacterium abscessus* 感染

英文題目：Linezolid as additional antibiotic for disseminated *Mycobacterium abscessus* in a patient with Anti-IFN-Gamma Autoantibodies Disease

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Introduction

Previous unrecognized disseminated nontuberculous mycobacterial (NTM) infection in non-HIV infected patients has been reported in Thailand since 2000. Study demonstrated that most of the patients tested positive for anti-interferon-gamma autoantibody (IFN- γ Ab), resulting in adult-onset immunodeficiency. There are almost 200 cases in Taiwan as reported so far.¹ These patient are vulnerable to nontuberculous mycobacteria infection, especially *Mycobacterium abscessus* due to notorious drug resistance nature. Treatment of infection remains difficult, due to lack of previous experience and limited cases globally.

Case Presentation

A 53-year-old woman who had initial presentation of generalized lymphadenitis with Salmonella infection. Both sputum and axillary lymph node culture yielded *Mycobacterium abscessus*. She was treated with classical antibiotics combination from beginning: Clarithromycin, Doxycycline and Morxifloxacin. Erythrocyte sedimentation rate (ESR) level was utilized for monitor of disease activity. Infection was suppressed by initial antibiotics regimen after first flare-up with progression of papules, macules with pustule over extremities and fever. Admission with intravenous antibiotics of Amikacin, Imipenem and Cilastatin were used for 4 weeks. But relapse was detected with new reactive skin lesion as recurrent bilateral inguinal lymphadenopathy with increased papules over four limbs. Doxycycline was replaced with Linezolid in conjunction with Clarithromycin and Morxifloxacin after another 5 weeks admission course with Amikacin, Imipenem and Cilastatin for relapse episode, which was prescribed for 2 months and discontinued thereafter due to anemia adverse events. Despite short duration of treatment with Linezolid, her clinical condition is stable and no signs of relapse in long-term follow-up.

Discussion

Neutralizing anti-interferon- γ autoantibodies were present in 81% of HIV-negative patients with disseminated nontuberculous mycobacteria associated infections, and in adults, these antibodies were associated with adult-onset immunodeficiency which can lead to disseminated nontuberculous mycobacteria infection.² Problems regarding treatment of *Mycobacterium abscessus* infections are unsolved due to lack of consensus on the optimal antimicrobial agents and combination therapy, optimal treatment duration. Small patient size report the outcomes at the end of linezolid treatment in adult-onset immunodeficiency patients were modest: 12 cases (75%) had complete or partial responses to the regimen but most experienced a persistent or relapsed infection

and the reasons for the poor outcomes was considered as short treatment duration of linezolid and development of drug resistance.¹ In our case, 2 months of linezolid treatment proved to be effective. Low-dose linezolid can be effective and the efficacy of combinations of linezolid with other adjunctive therapies for *Mycobacterium abscessus*. Hence, the optimal dosage, duration and combination should be further investigated.

References

1. Chetchotisakd P, Anunnatsiri S. Linezolid in the treatment of disseminated nontuberculous mycobacterial infection in anti-interferon-gamma autoantibody-positive patients. *Southeast Asian J Trop Med Public Health*. 2014 Sep;45(5):1125-31.
2. Browne SK, Burbelo PD, Chetchotisakd P, Suputtamongkol Y, Kiertiburanakul S, Shaw PA, et al. Adult-onset immunodeficiency in Thailand and Taiwan. *N Engl J Med*. 2012;367:725–34. 10.1056/NEJMoa1111160.