Treatment of Mycobacterium Abscessus Infection With Omadacycline - A Local Case Series

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Background: Conventional regimens for Mycobacterium abscessus often fail. Omadacycline shows in vitro activity and promising results in case series, though no local experience exists.

Methods: Omadacycline use in local culture-confirmed M. abscessus cases was reviewed.

Results:

- Since 2023, eight patients (age 58-79 years, 4 male, 4 female) have received omadacycline for treatment of M. abscessus infections after failing prior therapies (persistent symptoms and positive cultures).
- Six patients had pulmonary disease, 1 had cutaneous disease, and 1 had disseminated disease (multiple lymphadenopathy and skin lesions, positive blood culture).
- Duration of treatment prior to omadacycline ranged from 3 months to 10 years. Omadacycline was given concurrently with 2 or 3 other antibiotics in all patients, most commonly azithromycin (5 patients) and cotrimoxazole (4 patients).
- The dose of oral omadacycline used was 300 mg daily with no loading dose.
- Two patients had completed treatment (54 and 245 days). Six patients are receiving ongoing treatment, having received omadacycline for a median of 169 days (range 80-382) until 31 Jan 2026.
- Clinical improvement during treatment was noted in 7 patients (87.5%), while microbiological response (defined as culture conversion) was documented in 6 patients (75%). One patient had a relapse of M. abscessus pulmonary disease more than 1 year after stopping all treatment, and is planned to receive another course of omadacycline.
- Tolerability of omadacycline was acceptable. Two patients (25%) had mildly elevated alanine transaminase which normalized after stopping omadacycline, one of the patients was switched to alternative antibiotic while the other completed treatment as planned. Other side effects included: nausea (4; 50%), vomiting (1; 12.5%), diarrhoea (1; 12.5%). All the gastrointestinal side effects were mild, with one patient required dose adjustment (to 150mg daily).

Case	Age/Gender	Site of infection	Daily dose of omadacycline	Prior treatments	Concurrent antibiotics	Duration (days)	Clinical/microbiological response (Y/N)	Side effects
1	77/M	Pulmonary	300mg	AK,AZM,CFZ,IMI,LZD,SXT (since 2019)	AZM,AK,SXT	245	Y/Y	Raised liver enzyme (mild)
2	58/F	Pulmonary	150→300mg	AK,AZM,CFZ,IMI,LZD,SXT (since 2020)	AZM,AK,LZD	Ongoing (since 23/9/2025)	Y/Y	Vomiting (mild)
3	74/M	Cutaneous	300mg	AZM,IMI,LZD,SXT (since 5/2025)	AZM,SXT	Ongoing (since 18/8/2025)	Y/N	Nausea (mild)
4	66/F	Pulmonary	300mg	AK,CIP,CLR,DOX,LZD,MFX ,SXT (since 2015)	CFZ,MFX,SXT	Ongoing (since 15/8/2025)	Y/Y	Nausea (mild)
5	70/M	Pulmonary	300mg	AK,AZM,CFZ,CLR,IMI,LZD, SXT (since 2018)	LZD,SXT	Ongoing (since 15/8/2025)	N/N	Nausea (mild)
6	79/F	Pulmonary	300mg	AK,AZM,CFZ,IMI,LZD,SXT (since 2023)	CFZ,LZD	Ongoing (since 13/11/2025)	Y/Y	Nausea (mild)
7	71/M	Pulmonary	300mg	AK,AZM,CFZ,CLR,IMI,LZD, MIN,TGC (since 2021)	AZM,CFZ	54	Y/Y	Raised liver enzyme (mild)
8	74/F	Disseminated (blood, lymph node)	300→150mg	AK,AZM,CAZ,CFZ,IMI,LZD, TGC,SXT (since 2024)	AZM,RFB	Ongoing (since 14/1/2025)	Y/Y	Diarrhoea (mild)

AK = amikacin, AZM = azithromycin, CAZ = ceftazidime, CFZ = clofazimine, CIP = ciprofloxacin, CLR = clarithromycin, DOX = doxycycline, IMI = imipenem, LZD = linezolid, MFX = moxifloxacin, MIN = minocycline, RFB = rifabutin, TGC = tigecycline, SXT = cotrimoxazole

Conclusions: Omadacycline is a safe and effective oral option for the treatment of refractory M. abscessus disease. Its role warrants further exploration.