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## BACKGROUND

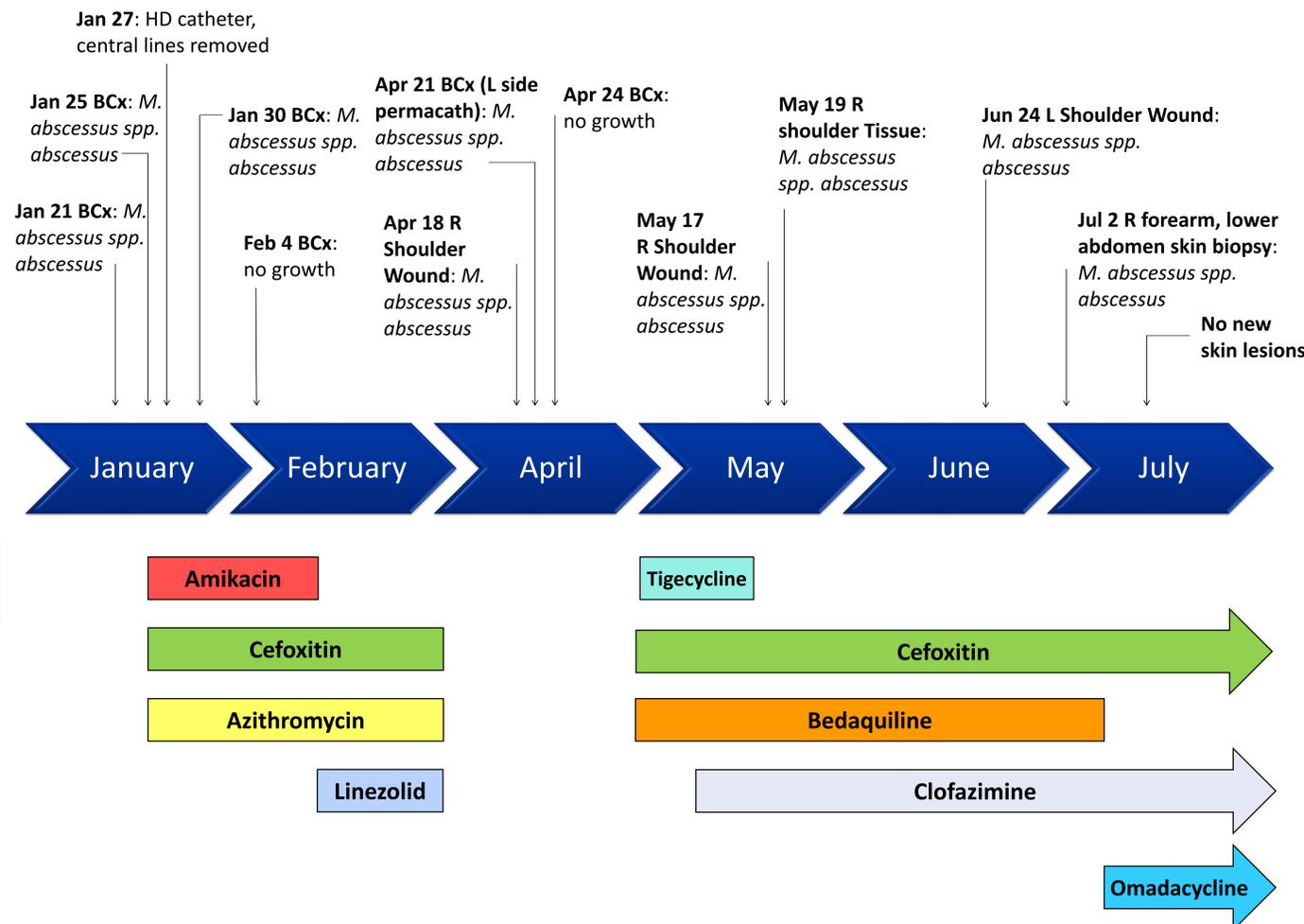
- Mycobacterium abscessus* (*M. abs*), a non-tuberculous mycobacterium (NTM) pathogen, is an aggressive cause of invasive disease in immunocompromised patients, including solid organ transplant (SOT) recipients
- Omadacycline is a novel antibiotic in the tetracycline class and has shown activity against NTM, including *M. abs*<sup>1</sup>
- Recent reports have demonstrated use of omadacycline to treat *M. abs* infections<sup>2,3</sup>
- We present the case of a lung transplant patient with disseminated *M. abs* successfully treated with omadacycline

## CASE DESCRIPTION

38-year-old woman s/p bilateral lung transplant for mixed connective tissue disease – interstitial lung disease (CTD-ILD) who required extra-corporeal membrane oxygenation support prior to transplant

- Post-transplant course complicated by persistent MRSA bacteremia & sternal wound infection
- Native / donor lung cultures never grew *M. abs*
- Initial evidence of *M. abs* infection in Jan from Bcx
- Treated in January/February x 8 weeks
  - Source likely line-related (HD catheter and central line removed); no skin involvement at that time
  - Repeat AFB Bcx were negative
- April: presented to transplant clinic w/ fever, skin lesions, fluid collection at previous catheter site (right)
  - Bcx, wound I&D resulted as *M. abs*
  - Aggressive I&Ds, no evidence of osteomyelitis
- May: new skin lesion on posterior shoulder (left) while receiving cefoxitin, clofazimine (via FDA approval) & bedaquiline
  - Skin biopsy AFB smear (+), culture grew *M. abs*
- Regimen adjusted to cefoxitin, clofazimine, omadacycline w/o further skin manifestations
- Patient passed away 1-year post-lung transplantation due to chronic rejection

## CLINICAL HISTORY/COURSE



## DISCUSSION

- While NTM infections vary amongst SOT recipients, lung transplant recipients have the highest incidence of these infections (0.46 – 8.0 %)⁴
- M. abs* infections can be difficult to treat post-SOT due to the pathogen’s ability to disseminate and limited therapeutic options⁴
- Omadacycline, a tetracycline antibiotic, has shown activity against *M. abs* in addition to favorable pharmacokinetic properties, including availability as an oral tablet¹
- In our patient’s case, her recurrent disseminated disease made treatment difficult over the course of prolonged hospital stays
- Due to evidence of treatment failure with a regimen including cefoxitin / bedaquiline / clofazimine, our patient was treated with a salvage regimen including omadacycline with a positive outcome

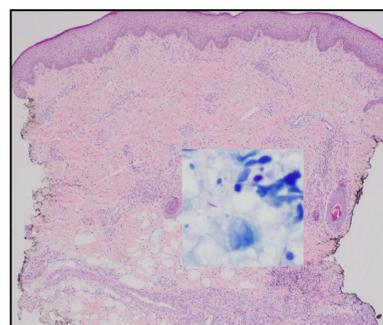
## CONCLUSION

- M. abs* infections in SOT recipients, especially lung transplant patients, is a difficult to treat infection with limited therapeutic options
- Omadacycline represents a potential treatment option for these patients that is generally well tolerated and offers an IV and oral antibiotic choice to combine with other therapeutic agents
- More clinical data is needed to better understand the role and position of omadacycline in NTM infections, including *M. abs*

## PHOTOS/IMAGES



April  
Chest wall site



May  
Skin biopsy, shoulder (left)  
AFB stain



May  
Lesion on shoulder (left)

## REFERENCES

- Bax HI, et al. *J Antimicrob Chemother* 2019; 74: 2930-3.
- Pearson JC, et al. *Open Forum Infect Dis* 2020; 7 (10): ofaa415.
- Morrisette T, et al. *Open Forum Infect Dis* 2021; 8 (2): ofab002.
- Longworth SA, et al. *Clin Transplant* 2019; 33: e13588.