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1233. Serious Toxicities During Antimicrobial Therapy for Disseminated Nocardia Infection in Solid Organ Transplant Recipients
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Session: P-72. Resistance Mechanisms

Background. Management of disseminated *Nocardia* (NC) infection in transplant recipients requires prolonged antimicrobial therapy. Treatment can be particularly challenging if NC is resistant to standard agents. Drug toxicities can further limit options. We present a series of transplant patients with multi-drug resistant, disseminated NC infection complicated by serious adverse reactions to sequential antimicrobials.

Methods. This is a prospective review monitoring response to treatment of disseminated NC as well as adverse events to therapies.

Results. The first case is a 66-year old heart transplant patient who presented with fever and cough. Investigations revealed *N. otitidiscaviarum* lung lesion and multiple brain abscesses. Trimethoprim-sulfamethoxazole (TMP-SMX) and linezolid were started empirically. NC was fully susceptible to linezolid only, and intermediate to quinolones and tobramycin. Linezolid was switched to ciprofloxacin due to ongoing cytopenia, and dose of TMP-SMX was reduced due to renal insufficiency. Repeat brain MRI showed enlarging abscesses; regimen was changed to linezolid and moxifloxacin. Severe peripheral neuropathy led to linezolid discontinuation and initiation of high-dose doxycycline plus moxifloxacin. One year into therapy, he presented with a large aortic dissection. His long-term quinolone therapy was felt to be contributory. He underwent aortic stent placement and remains on doxycycline monotherapy. The second case is a 74-year old female renal transplant patient who presented with fevers. A perinephric abscess was found which grew *N. farcinica* resistant to fluoroquinolones and clarithromycin, and intermediate to doxycycline. Further imaging also revealed pulmonary and brain involvement. TMP-SMX was started but soon switched to linezolid due to acute kidney injury. One month later she presented with severe thrombocytopenia and subdural hematoma thought to be secondary to linezolid. She died despite surgery.

Conclusion. This series illustrates challenges encountered in the treatment of disseminated NC infection in transplant recipients. Multidrug resistant NC coupled with serious toxicities of therapies often severely limits treatment options. Counseling patients and closely monitoring for adverse events is essential.

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1234. Can Susceptibility to One Carbapenem be Conferred to Another? Frequency of Discordance in Gram-negative Clinical Isolates

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Session: P-72. Resistance Mechanisms

Background. Carbapenem-Resistant Enterobacterales (CRE) and Carbapenem-Resistant *Pseudomonas aeruginosa* (CRPA) can exhibit resistance to one carbapenem while remaining susceptible to another. While case reports describing discrepant carbapenem susceptibilities are available, the authors are unaware of any literature reporting aggregate carbapenem susceptibility discrepancies at a hospital level.

Methods. Susceptibility data from April 1, 2017 - December 31, 2017 was extracted through an antibiogram report for a 706-bed hospital. Ertapenem, imipenem-cilastatin, and meropenem susceptibilities were captured and compared for common Enterobacterales and *Pseudomonas aeruginosa*. Organism identification was performed using Matrix Assisted Laser Desorption Ionization-Time of Flight (MALDI-TOF) mass spectrometry. Antibiotic susceptibility testing was performed using BD PhoenixTM. Carbapenem susceptibilities were interpreted using the most updated Clinical and Laboratory Standards Institute (CLSI) breakpoints at the time of assessment (2021). Carbapenem discordance was defined as an organism being susceptible to one carbapenem and non-susceptible (intermediate or resistant) to another. Approval was obtained from the institution's Institutional Review Board.

Results. Meropenem proved to be the most active antimicrobial for all organisms (Figure 1). Carbapenem susceptibility discordance ranged from 0%-23.8% (Table 1). There was a significant difference in the incidence of discordance between Enterobacterales and *Pseudomonas aeruginosa* isolates (2.6% vs. 6.1%, p < 0.001). Of the 20 *Pseudomonas aeruginosa* isolates with discordant carbapenem susceptibilities, 70% were meropenem susceptible/imipenem non-susceptible and 30% were imipenem susceptible/meropenem non-susceptible. The most common site for discordance was urine for both Enterobacterales and *Pseudomonas aeruginosa*. However, while there was a significant rate of discordance between sites for *Pseudomonas* isolates, this was not the case for Enterobacterales (Table 2).

Figure 1: Carbapenem Susceptibility by Isolate

