"Risk factors for multidrug-resistant organisms among deceased organ donors"
Additional Q&A from Thursday, October 31, 2019 – Link to Recording

What are your pre-op antibiotics for patients with prior LVAD in place without known colonization? Is cefazolin still your drug? How about recipients with known colonization?
At the Hospital of the University of Pennsylvania, we typically give vancomycin and either a third-generation cephalosporin or cefepime peri-operatively to heart transplant recipients with a prior LVAD. (The donor peri-procurement antibiotics are not altered based on the recipient LVAD status.) If the recipient has known MDRO colonization pre-transplant, we consider expanding the perioperative prophylaxis to cover those organisms on a case-by-case basis. There is limited data on these practices. We published our standard perioperative prophylaxis strategies in Transplantation Jan 2018;102;1:21-34.

What is the indication and data for perioperative cefazolin in the donor since we do not really care if they develop post-op surgical site infection (which is the main indication for peri-op prophylaxis on the recipient side)?
The use of antibiotics among organ donors is not well-studied. It has been demonstrated previously that if a known infection is present in the donor, the donor is less likely to transmit that infection to the recipient if it is treated prior to organ procurement. The indication for perioperative cefazolin has probably been extrapolated from that principal, with the idea that standard antibiotics for the donors may treat some subclinical or occult infection in the donor. Based on the results of our study, however, I think it is possible that these empiric antibiotics are doing more harm than good. I am not aware of any clinical studies that have demonstrated a benefit of donor peri-procurement cefazolin for recipient outcomes.

What was the microbiome of marijuana? Was that the microbiome of the donor?
There have been recent studies describing the microbiome of marijuana; I refer you to: Thompson et al. Clin Microbiol Infect. 2017;23:269. Our hypothesis is that marijuana use in the donor may increase the risk for MDROs in the donor due to colonization of marijuana with MDROs.

What could NGS contribute to the early identification of donor MDROs, including detection of genes associated with resistance, and especially when the donor has a mixed infection or is culture-negative because of prior antibiotic administration?
NGS, as well as other forms of rapid diagnostics, could be extremely useful in donor evaluation. Particularly, as you mention, it would be extremely useful to determine the presence of an MDRO/resistance mechanism at the time of donor evaluation to minimize the delay in recipient testing/treatment.

Are MDR non-tuberculous mycobacteria part of this problem?
Per DTAC, there are no examples of donor-derived infections due to NTM (whether MDR or not) that have been reported.

What antibiotic prophylaxis is currently recommended for recipients of DLTs?
We published our standard perioperative prophylaxis strategies in Transplantation Jan 2018;102;1:21-34. This reference includes our regimens for lung transplants, which typically includes vancomycin plus either a third-generation cephalosporin or cefepime.