**ABSTRACTS ACCEPTED**

**205.1**

**Sensitization and Preformed Donor Specific Antibody in Intestinal Transplantation: survival and rejection outcomes.**

Jason Hawksworth, Ahmed M. Elsabbagh, Sandra Rosen-Bronson, Raffaele Girlanda, Alexander Kroemer, Stuart Kaufman, Khalid Khan, Nada A. Yazigi, Rohit Satoskar, Thomas M. Fishbein, Cal Matsumoto.
MedStar Georgetown Transplant Institute, MedStar Georgetown University Hospital, Washington DC, DC, United States.

**Introduction:** Sensitization has historically been shown to decrease allograft survival in intestinal transplantation (ITx). Contemporary data increasingly demonstrates that donor specific antibody (DSA) is responsible for increased risk of rejection and graft loss in sensitized ITx recipients.
**Methods:** Beginning in 2008 recipients were screened for preformed DSA prior to transplant at our institution. All ITx performed at our institution from 2008 through 2016 were included in this study and evaluated with the use of a prospectively maintained database. DSA prior to transplant was determined with the use of solid phase assays and was considered positive with a median fluorescence intensity (MFI) >1000. Standard immunosuppression (IS) consisted of IL2 blockade induction with maintenance IS of tacrolimus, sirolimus, and prednisone. Sensitized recipients generally received thymoglobulin induction and IVIG followed by standard maintenance IS.
**Results:** 144 ITx transplants were performed during this period (69 pediatric and 75 adult) including 101 isolated intestine, 26 liver/intestine, 13 multivisceral transplants and 4 modified multivisceral transplants. The median follow up was 56.4 months. There were 3 comparison groups: non-sensitized recipients (n=74), sensitized recipients without preformed DSA (n=57) and sensitized recipients with preformed DSA (n=13). The 13 recipients with preformed DSA included 11 isolated intestine transplants, 1 multivisceral transplant and 1 modified multivisceral transplant and 9 were adults. The mean PRA +/- SD in the sensitized group without preformed DSA was 77 +/- 28 and 36 +/- 30 in the sensitized group with preformed DSA (p<0.001). Recipients with a positive T cell and/or B cell flow crossmatch was 7% in the sensitized group without preformed DSA and 54% in the sensitized group with preformed DSA (p=0.007); no patient in the non-sensitized group had a positive flow crossmatch. In the sensitized group without preformed DSA compared to the non-sensitized group, there was no statistical difference in 1-, 3, and 5-year patient survival (72%, 65%, and 65% versus 86%, 79%, and 75% p=0.065), 1-, 3-, and 5-year graft survival (70%, 65%, and 59% versus 84%, 78%, and 69% p=0.163), and 1-, 3-, and 5-year freedom from rejection (66%, 66%, and 51% versus 77%, 77%, and 71% p=0.160). In the sensitized group with preformed DSA compared to the non-sensitized group, there was a statistically lower 1-, 3-, and 5-year patient survival (49%, 49%, and 49% versus 86%, 79%, and 75% p=0.015), 1-, 3-, and 5-year graft survival (49%, 39%, and 39% versus 84%, 78%, and 69% p=0.017), and 1-, 3-, and 5-year freedom from rejection (25%, 25%, and 25% versus 77%, 77%, and 71% p=0.0001).
**Conclusions:** Sensitized intestine recipients with preformed DSA have an increased risk of rejection, graft loss and mortality. Avoidance of preformed DSA in sensitized recipients may improve outcomes following intestine transplant.