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P202 -VALVULAR LESIONS FROM ROUTINE PRE-OPERATIVE ECHOCARDIOGRAMS AND POST KIDNEY TRANSPLANT COMPLICATIONS: A SINGLE-CENTRE ANALYSIS

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INTRODUCTION. While there is consensus that high-risk kidney transplant candidates should undergo cardiovascular assessment prior to surgery, the is a lack of consensus with regards to cardiovascular screening among lower risk candidates. Published society guidelines differ in their recommendations and have led to heterogenous clinical practise including the use of pre-operative echocardiograms. In a recently published European survey, 45% of respondents stated an echocardiogram should be added to the standard work-up of low-risk candidates (Maggiore et al. NDT 2019). At our centre, echocardiograms are performed for all kidney transplant candidates and routinely repeated every three years as surveillance while awaiting transplantation. However, the association between pre-operative valvular lesions and post-transplant complications is unclear and we aimed to investigate this further in a single-centre retrospective analysis.

METHODS. Data was extracted from hospital informatics systems for all kidney allograft recipients transplanted at our centre between 2007 and 2018. Electronic patient records were manually searched for the most-up-to-date pre-operative echocardiogram to facilitate data linkage. We excluded recipients with missing pre-operative echocardiogram reports (predominantly due to external referrals for transplantation). Mortality, graft loss, delayed graft function, 1-year rejection and 1-year creatinine values were crosschecked with the UK Transplant Registry. Pre-operative valvular lesions extracted included aortic stenosis, aortic regurgitation, mitral stenosis, mitral regurgitation and tricuspid regurgitation. Each valvular lesion was categorised as none/trivial/mild/moderate/severe.

RESULTS. Our total cohort for analysis consisted of 761 kidney transplant recipients, with both pre-operative echocardiograms available and post-transplant outcomes. Median follow up time was 1,444 days (IQR 608 to 2,499 days). Baseline demographics for the cohort were; median age 48 years (IQR 38–58 years), male gender 57.8% and white ethnicity 58.6%. Certain valvular lesions were more commonly observed than others as shown in the Table.

Excluding TR, all valve lesions were significantly more commonly seen among recipients aged 50 and over. Increasing severity of individual valve lesions was not associated with risk for mortality or graft loss. Worsening grades of MR on pre-transplant echocardiogram was associated with increased risk for emergency re-admission to hospital within 90-days post-transplantation; moderate MR (70.4%) versus mild MR (38.7%), trivial MR (41.3%) and no MR (41.9%). No other valve lesion had an association with emergency re-admission rates. There was no association between severity of valve lesion and risk for re-admission due to a cardiovascular event. We did observe more cancer and infection-related admission for people with mild AS (p=0.049 and 0.010 respectively) in our dataset, but this association is unlikely to imply causality.

DISCUSSION. The utility of pre-transplantation echocardiograms to identify valvular lesions pre-operatively among kidney transplant candidates is unproven, regardless of whether they are low or standard risk. A clear limitation of our study is the inherent selection bias as this cohort only includes candidates who

proceeded to kidney transplantation, with some exclusions possibly related to significant valvular lesions. However, this data suggests the recommendation from the ERA-EDTA Expert Working Group to minimise diagnostic tests in asymptomatic kidney transplant candidates aged under 50 are valid and would reduce un-necessary investigations that delay transplantation work-up.