**Mortality rates in heart transplant recipients with type 2 diabetes**

Background & Aim

Heart transplantation (HTx) is a lifesaving procedure for end-stage heart failure (HF). Australian five year HTx survival rates approximate 85%. Increasingly, people with type 2 diabetes (T2DM) will develop HF and be assessed for HTx. The presence of T2DM in HTx recipients is associated with increased mortality; however, there is limited data characterising pre-transplant factors that contribute to excess mortality risk. We assessed pre-transplant factors associated with mortality rate in HTx recipients with T2DM.

Methods

Single centre retrospective audit of people with T2DM who underwent HTx between 2015 to 2022.

Results

There were 74 HTx recipients with T2DM. The mortality rate during follow-up (up to 5-years) was 32% (n=24), with median time to death of 1.8 years (IQR 0.5 – 3.1). Baseline age, sex, body mass index (BMI), glycated haemoglobin (HbA1c) and estimated glomerular filtration (eGFR) did not differ based on mortality outcome (Table). Sodium glucose co-transporter 2 (SGLT2) inhibitor exposure (n=27, 54%) was more common in the ‘survival cohort’ than in the ‘mortality cohort’ (n=6, 25%; p=0.03). On cox regression, none of the previously listed factors were associated with mortality.

Table: Baseline characteristics in heart transplant recipients with type 2 diabetes

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| Characteristics  | Survival cohort (n=50) | Mortality cohort (n=24) | p-value |
| Age (years) | 60 (53-65) | 58 (50-64) | 0.31 |
| Sex (male) | 43 (86) | 19 (79) | 0.51 |
| BMI (kg/m2) | 26.7 (22.9-30.2) | 29.2 (25.6-31.3) | 0.18 |
| HbA1c (%) | 6.9 (6.4-7.6) | 6.5 (5.8-7.7) | 0.27 |
| eGFR (mL/min/1.73m2) | 59 (46-80) | 57 (38-74) | 0.45 |

Conclusion

HTx recipients with T2DM had higher 5-year mortality than Australian registry data. There was no association between demographic factors and mortality. SGLT2 inhibitors may be associated with increased survival. However, prospective studies are required.