Troponin T is an independent predictor of mortality in renal transplant recipients

Sir,

The article by Connolly et al. [1] is an important addition to the literature pertaining to cardiovascular disease (CVD) management of kidney transplant recipients. Although interesting, it is not an unexpected finding that higher levels of troponin T were associated with worse CVD outcomes in patients with a high CVD risk profile. In this study, patients with elevated troponin T levels (≥0.03 µg/L) were older and had known CVD compared to patients without troponin T elevation. Similarly, kidney transplant recipients who died during follow-up were older, more likely to have diabetes or prior CVD compared to surviving patients. The presence of pre-existing coronary artery disease or congestive heart failure was not reported in the description of the study population. Increased age, diabetes, history of coronary artery disease, congestive heart failure and previous CVD are known to portend a poor prognosis in kidney transplant recipients [2,3], and patients with these CVD risk factors should undergo aggressive risk factor modification irrespective of their troponin level.

It would be extremely interesting, however, if the authors were able to stratify patients with elevated levels of troponin T (≥0.03 µg/L) into two groups (low and high risk) based on the presence or absence of known CVD risk factors [4]. It would be relevant for clinicians to know what proportion of ‘low risk’ patients had elevated troponin levels and died during follow-up in this study. ‘Low risk’ patients do not routinely undergo aggressive CVD risk factor modification. Thus, elevated troponin T levels in ‘low risk’ patients might help to identify a subgroup of patients that might benefit from aggressive CVD risk management.

Conflict of interest statement. None declared.

Reply

Sir,

We would like to thank Drs Shroff and Kasiske for their comments. Traditional cardiovascular risk factors are associated with a poorer prognosis in renal transplant recipients [1]. However, the results from our study demonstrated that in multiple logistic regression analyses an elevated troponin T (TnT) level remained an independent predictor of all-cause mortality [2].

In response to the points raised by Drs Shroff and Kasiske, we stratified patients into high and low cardiovascular risk based on the presence of traditional cardiovascular risk factors (i.e. age >50 years, diabetes and smoking). Participants were classified as ‘low’ cardiovascular risk if they had ≤1 risk factor and ‘high’ risk if they had ≥2 risk factors. Of the 61 renal transplant recipients who had died at follow-up, 42 were identified as ‘low’ cardiovascular risk and 19 as ‘high’ cardiovascular risk.

We then assessed the utility of TnT level in relation to all cause mortality in the ‘high’ and ‘low’ cardiovascular risk groups. Of the 19 patients classified as ‘high’ cardiovascular risk, 5 had an elevated TnT and 14 had a normal TnT.