PRE RENAL TRANSPLANT CARDIOVASCULAR ASSESSMENT

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Introduction and Aims

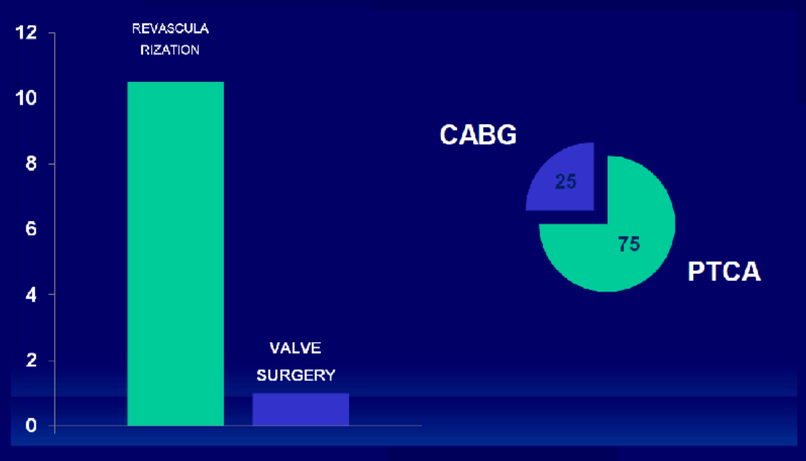
Candidates for renal transplantation (RTx) are exposed to increased risk of cardiovascular (CV) events and death during waiting list, perioperative and follow-up. It is controversial CV risk assessment strategies in this setting. We sought to identify CV risk profile in RTx candidates. We hypothesized that an aggressive approach could reduce CV event rate in patients (P) who are evaluated as RTx candidates.

Methods

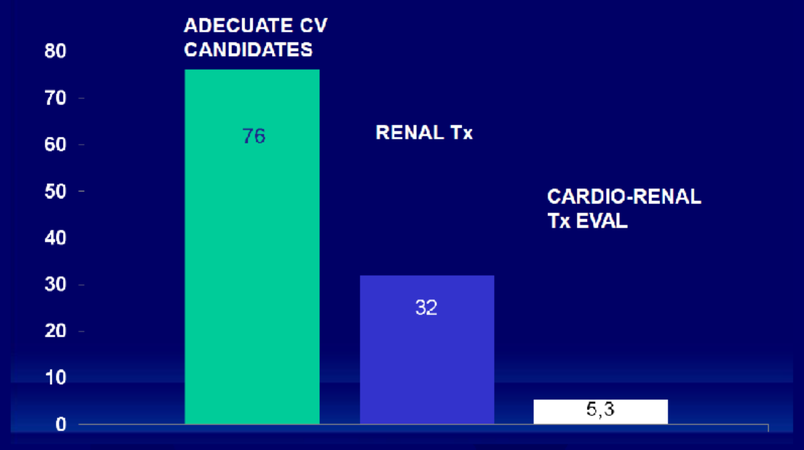
Demographic, clinical and biochemical data were recorded. CV events included acute coronary syndromes (ACS), heart failure (HF), valve disease and arrhythmias, as well as procedures during follow up. Cinecoronariography (CCG) was indicated if P were ≥ 60 years old (y) without diabetes (DBT) or ≥ 40 y and DBT or history of angina, HF admissions, myocardial infarction, systolic dysfunction, ventricular arrhythmia or positive functional assessment.
This report reflects P evaluated by a single observer (PK).

248 pts

PRE RTx CARDIAC PROCEDURES



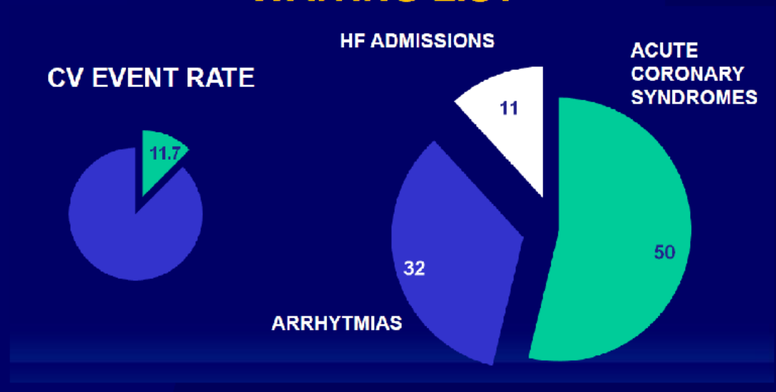
APPLICABILITY & FOLLOW UP



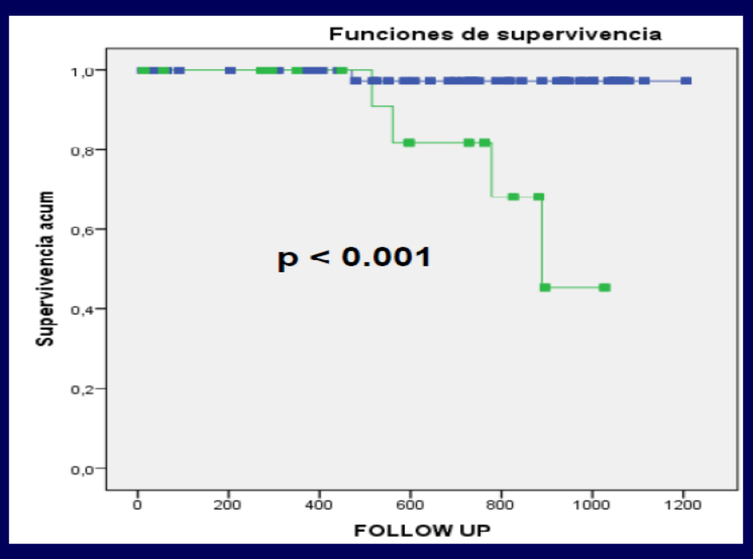
Results

Two hundred and forty-eight consecutive P were assessed between June 2010 and March 2014. Fifty-eight percent were male, mean age 53±14 y; 60% older than 50 y. History of hypertension 62% , DBT 6.9% and thrombophylia 16% were found. Ninety-eight percent were under previous dialysis. Previous RTx had been performed in 21.1% and parathyroidectomy in 18%. No differences in iPTH, serum calcium, phosphorus and RCP values were detected related to pre RTx events (p=NS).
Prior cardiac disease was found in 57%, namely hypertensive, ischaemic and valvular heart disease. Previous myocardial infarction was detected in 14%. Percutaneous angioplasty (PA) had been performed in 6.3%, and coronary artery bypass graft (CABG) in 4.2%.
Considering valvular heart disease P, mitral valve disease was the most frequent (moderate to severe regurgitation in 50%; stenosis in 10%; aortic valve disease in 22%. Near 1% had previous valve surgery.
Seventeen percent P had history of cardiac arrhythmias, mainly atrial fibrillation (50%). Echocardiographic left ventricular ejection fraction was 57±9%. Systolic dysfunction was detected in 11.8 % P. Ten percent had suffered a prior Stroke. Ischaemic risk evaluation was performed in 23% of P by means of dobutamine stress echocardiography and in 50% by dipyridamole stress scintigraphy. CCG was performed in 38.5% . Almost normal angiography was observed in 39% of P. 76% were considered suitable CV candidates for RTx. Due to advanced heart disease combined heart-RTx candidacy evaluation was performed in 5.3 %.
After initial assessment, 10.5 % were revascularized (PA in 75%; CABG in 25%), while 1 % received valve surgery. No P required revascularization procedures after RTx procedure; less than 1% P had acute heart failure in immediate RTx. RTx was performed in 32% P during the study period.
CV event rate during waiting list was 11.7%, being the most frequent ACS (50%), arrhythmias (32%) and HF admissions (11%).
After RTx 28.8% P had CV events, being ACS and HF the most frequent.
Waiting list mortality was 8.3 % at 606 ± 336 days follow up (mainly due to ischaemic heart disease; 3.7-fold). Six percent P died after RTx follow up.

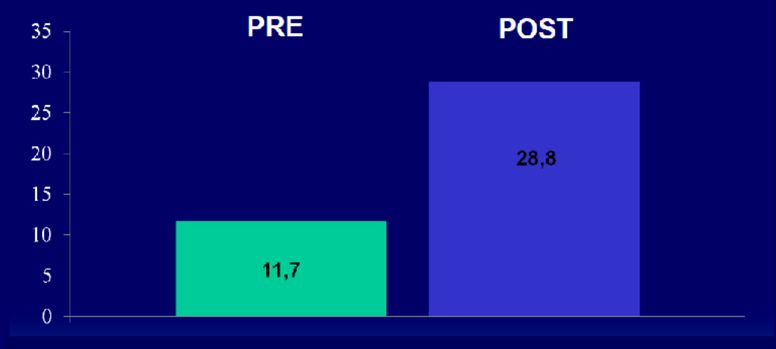
CV EVENT RATE DURING WAITING LIST



OUTCOMES PRE RENAL TX Ischaemic Heart disease



PRE and POST RTx CV EVENT RATE



Conclusions and perspectives

CV events were prevalent in our population, the most frequent ACS, HF admissions and arrhythmias. Phosphocalcic metabolism and inflammatory markers during pre RTx evaluation were not associated with increased risk. An aggressive CV assessment strategy determined low event rate both during waiting list and follow up. The cost of this strategy was exclusion of near 20% of RTx candidates. Decision making in high risk CV population is controversial, as RTx is recognized as a tool for mortality rate decrease in end stage kidney disease. It should be the subject of future studies, as dilemma between CV mortality and RTx risk assessment still remains undefined.

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Authors declare that they have no conflict of interest regarding the material discussed in the present poster

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