Chronic heart failure: management of chronic heart failure in adults in primary and secondary care

A clinical guideline for the NHS in England and Wales

APPENDIX J: EVIDENCE TABLES

Section 7.4: Invasive Procedures - Cardiac Transplantation

Cardiac Transplantation

Paper	Deng, M. C., De Meester, J. M., Smits, J. M., Heinecke, J., & Scheld, H. H. 2000, "Effect of receiving a heart transplant: analysis of a national cohort entered on to a waiting list, stratified by heart failure severity. Comparative Outcome and Clinical Profiles in Transplantation (COCPIT) Study Group", *BMJ*, vol. 321, no. 7260, pp. 540-545.
Description	Cohort study
N=	n=889 High risk of mortality = 107 (12%), medium risk =360 (41%), low risk =422 (47%) Age =52yrs, Male =85%, NYHA class =3.3 (mean), LV ejection fraction =22% Germany
Intervention	Prognostic factors for being as high, low or medium risk are tested against outcome. By means of multivariate modelling and definition of arbitrary cut-off points, three groups of disease severity were defined in the cohort.
Outcomes	An outcome of global mortality whether on list or post transplant to define relative risk of death after having received a transplant compared to risk of mortality without transplant
Results	• The patients who were at high risk according to HF survival score had a significantly higher chance of dying (51%) than those patients at medium (32%) and low risk (29%) ($p<0.0001$) for both comparisons • Transplant effect was assessed by comparison of risk before and after transplant, for the total cohort there was no survival benefit found. • For high risk patients a mortality benefit was observed within 2 weeks of transplant with a relative risk of mortality <1 with this benefit disappearing after 8 months post transplant. The likelihood ratio for interaction term between groups in survival analysis was significant at ($p=0.04$)
Comments	All adults aged 16 or over who were consecutively listed for cardiac transplantation between 1 January and 31 December 1997 are included as a convenience cohort Prognostic factor was made using the heart failure survival score it is the weighted sum of seven non-invasive clinical parameters, " the presence of coronary artery disease (impact of aetiology); the presence of intra ventricular conduction delay (degree of cardiac damage); left ventricular ejection fraction (extent of impairment of left ventricular function) heart rate and serum sodium concentration (measures of activation of the sympathetic nervous system and rennin-angiotensin system); and mean arterial pressure and peak oxygen uptake (reflections of the systemic impact of chronic heart failure). The transient nature of survival benefit for high-risk patients is owing to the fact that the composition of the cohorts changes over time with the numbers who have and have not received a transplant always in flux. No QOL or cost analysis undertaken Suggest that transplantation should only be limited to sickest patients