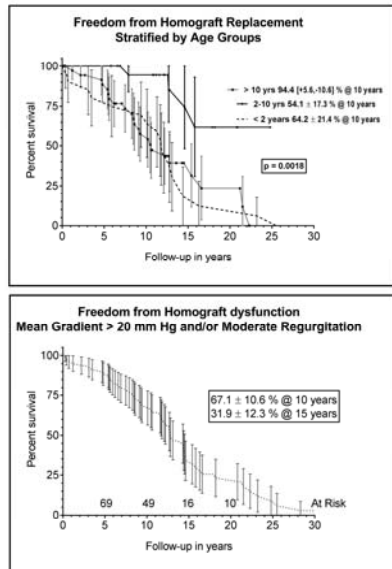


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Single Centre Long-term results of 92 homografts in pulmonary position with 1300 patient years of Follow-up

Schmiady M., Greutmann M., Kretschmar O., Balmer C., Schweiger M., Pretre R., Hübler M., Dave H. Children's Heart Centre, University Children's Hospital, Zürich, Switzerland.



Introduction:

To report the long-term outcome of 92 fresh frozen homografts implanted in pulmonary position at a single institution from 1990-2012.

Methods:

92 consecutive fresh frozen homografts implanted were followed up. Median age and weight were 14.3 (0.01-28.7) years and 44.8 (2.5-87) kg respectively. Indications for implantation were pulmonary valve dysfunction late after primary repair (19), Repair of TOF (17), pulmonary atresia (15), Truncus arteriosus (4), Rastelli Operation (6), Ross Procedure (29) and Miscellaneous (3). Median homograft size was 19.5 (13-26) mm with a Z value of 0.6 (-1.6 to 4.6). Follow-up duration was 14.2 (0.1-28.3) years and was 93% complete.

Results:

Kaplan Meier patient survival as well as freedom from endocarditis was 100% at 14 years. Freedom from replacement was $37.4 \pm 13.5\%$ at 15 years (At Risk 14). Nine patients were subjected to balloon valvuloplasty for stenosis resulting in freedom from reintervention of $73.9 \pm 13.7\%$ at 15 years. Severe graft dilatation/aneurysm formation occurred in two patients. Homograft survival was significantly better in older patients ($p=0.0018$; Fig 1) and in orthotopic position ($p=0.0005$). Freedom from composite homograft dysfunction (Mean gradient ≥ 20 mm Hg and/or Moderate Regurgitation) was $31.9 \pm 12.3\%$ at 15 years (Fig 1).

Conclusions:

Long-term follow up of homografts in pulmonary position serve as a reference with which the outcome of competing grafts such as Bovine jugular Vein Grafts as well as the newly revisited decellularized homografts would be compared. The incidence of replacement, as well as functional status of the remaining in-situ homografts continues to highlight the need for further innovative approaches to reduce the cyclic need for multiple replacements over a patient's life-time.