

Single centre long-term results of Contegra grafts with 1700 patient years of follow-up

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Objectives: To report the long-term outcome of 170 Contegra grafts implanted in Right Ventricular Outflow tract at a single institution from 2001-2007.

Methods: 170 consecutive Contegra grafts implanted were followed up. Median age and weight were 9 (0.01-73.5) years and 23 (1.9-96.4) kg respectively. Indications for implantation were pulmonary valve dysfunction late after primary repair (91), Repair of TOF, Pulmonary atresia, Truncus arteriosus and Rastelli (43), Ross Procedure (29) and Miscellaneous (8). 57 grafts were <16 mm and 114 were ≥16 mm. Z value of the grafts was 1.6 (-3.1 to 7.3). Pulmonary arborization associated with chronic regurgitation was called dilatative, that in Ross Procedure was called normal and that associated with stenotic/restrictive substrate was called obstructive. Follow-up duration was 9.6 (0.6-15.3) years and was 95% complete. **Results:** Kaplan Meier patient survival was 90±2.4% at 14 years (No. remaining 54), none of the death was related to Contegra. Freedom from replacement was 55.3±4.3% at 14 years (No. remaining 22). Contegra survival was significantly better in older patients, bigger grafts, in orthotopic position, in patients coming late after primary repair (Fig 1) as well in dilated pulmonary vascular tree (Table 1). Contegra survival stratified according to diagnostic class is detailed in Figure 1. 50% of the Contegra <16 mm were replaced at 4.5 years. 80% of all the surviving Contegra were free of intervention and 57% free of composite dysfunction (Mean gradient ≥20 and/or Regurgitation ≥ Moderate) at 14 years (Table 1).

Conclusions: The search for longer lasting alternatives to smaller Contegra including conduit-less reconstruction techniques continues. Despite this, their off-the-shelf availability and tubular morphology render Contegra a place in every congenital cardiac centre. The results of larger Contegra justify their place as a pulmonary valve substitute typically in teenage patients presenting late after primary repair.

Table 1.

Freedom from Replacement	Survival %	@ in years	No. At Risk	p Value	Mean Survival
By Age group					
< 2 years	24±6	10	10		7 (5-8) yrs.
2 - 10 years	54±10	10	13	< 0.001	11 (9-13) yrs.
> 10 years	82±5	10	51		14 (13-14) yrs.
By Contegra size					
< 16 mm	26±6	10	12	< 0.001	6 (5-7) yrs.
≥ 16 mm	78±4	10	65		13 (13-14) yrs.
Pulmonary arborization					
Obstructive	31±7	10	14	< 0.001	7 (6-8) yrs.
Normal	52±11	10	10		11 (10-13) yrs.
Dilatative	86±4	10	53		14 (13-14) yrs.
Implant Position					
Orthotopic	68±5	10	59	< 0.001	12 (11-13) yrs.
Heterotopic	47±7	10	18		9 (8-11) yrs.
Freedom from Endocarditis	93±2.4	14	42	Incidence of endocarditis	
Freedom from Cath Interv.	80±3.5	14	25	0.5% per patient year	
Freedom from comp. dysfun. (PS≥20 mmHg. &/or PR≥mod.)	57±7	14	23		

Figure 1

