

## The Melody valved stent is more vulnerable for endocarditis than homografts or Contegra conduits in RVOT

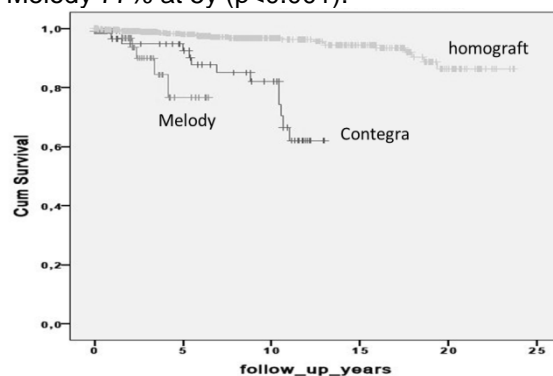
Van Dijck I., Budts W., Eyskens B., Cools B., Heying R., Louw J., Boshoff D., Frerich S., Vanagt W., Troost E., Meyns B., Rega F., Gewillig M.  
University Hospital Leuven, Belgium

**Background** All RVOT conduits are vulnerable for infective endocarditis (IE) which influences conduit longevity and clinical outcome. The incidence of IE of the Melody valved stent needs to be compared with other RVOT conduits.

**Patients and methods** Retrospective study including all patients in the database of a tertiary center with an implantation of a homograft (European Homograft Bank), Contegra™ graft or Melody™ conduit in RVOT.

**Results** 827 conduits were implanted in 657 patients. Between 1989 and 2013, 660 homografts were implanted in 579 patients (age  $15.7 \pm 12.8$ y, range 3d- 66y); IE occurred in 23 pts during follow-up of  $7.6 \pm 6.3$ y (0-23.7y). 59 Contegra™ grafts were implanted in 58 patients between 2000 and 2003 ( $9.2 \pm 8.6$ y, range 3d-47y); 13 (22%) had IE during follow-up of  $7.5 \pm 3.9$ y (range 0.3-12.9y). 109 Melody™ valved stents were implanted in 108 pts ( $18.3 \pm 12.2$ y, range 4-80y) in 2006-2013; IE occurred in 6 (5.5%)pts during  $1.5 \pm 1.9$ y (0-6.4y). The bacteria in the Melody group were *Corynebacterium pseudodiphtheriticum* (1), HACEK(1), *Haemophilus Aphrophilus*(1), *Streptococcus Viridans* (2), *Streptococcus Sanguinis*(1); inadequate prophylaxis had been present in at least 2 patients.

Survival free of endocarditis by Kaplan-Meier was for homografts 98% at 5y and 86% at 20y; Contegra 92% at 5y and 62% at 10y; Melody 77% at 5y ( $p < 0.001$ ).



The Melody conduit was sterilized successfully after 4-6 weeks IV antibiotics; 2 valves were obstructive at presentation: 1 valve was overstented at presentation (SBE then not diagnosed) and 10 months later revalvulated with a new Melody; 1 valve had PS 42 mmHg, the other 4 valves functioned well after medical cure (PS <25 mmHg, PR < 2/4).

### Conclusions

The Melody valved stent is significantly more vulnerable for endocarditis than a homograft or Contegra conduit. Optimal prophylaxis might reduce the incidence, but adapted strategies will be required to obtain adequate longevity.