

### YIA-3

#### **Fever within 48h after Melody implantation is a risk factor of late infective endocarditis**

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**Objectives.** Fever following pulmonary valve implantation is known but its frequency and impact have been poorly described. The aim of this study was to analyze clinical and biological parameters of inflammation just after the Melody valve implantation, and to see if early onset of inflammation can predict the risk of late infective endocarditis (IE).

**Methods.** We performed a retrospective study on patients with Melody valve implanted for dysfunctional RVOT in our unit between January 2008 and December 2016. All clinical and biological inflammatory parameters following Melody implantation were recorded.

**Results.** 198 patients were included (median age=22.8 [Q1-Q3: 15.4-31.5] years). Before the procedure, the RVOT statute of patients was: 74 (37.4%) pulmonary valved conduits, 57 (28.8%) natives (with or without valve), 50 (25.2%) homografts, and 17 (8.6%) valveless conduits. Within 48h post procedure, 58 patients (29.3%) had fever [ $T > 37.9^{\circ}\text{C}$ ] and 140 patients (70.7%) had no fever, 98 patients (13.6%) had a CRP  $> 5\text{mg/L}$ , and 61 patients (30.8%) had white blood cells (WBC)  $> 10\text{G/L}$ . 55 patients received large spectral antibiotic regimen waiting for results of blood culture. No patients were found to have early IE and antibiotics were stopped after a median duration of 2 [1-2] days. Length of stay was longer in patients with fever compared to those without fever ( $p < 0.001$ ). The median follow-up was 3.3 [1.3-5.3] years. Twenty-one patients developed IE (10.6%), with a median at 1.8 [0.3-3.5] years. At 5 years, freedom from IE was 87.2%. Fever within 48h post procedure was a significant risk factor (HR=6.1, IC95%[2.5-15.1],  $p < 0.001$ ). At 5 years, freedom from IE was 88.5% for patients without fever and 67.7% patients with fever within 48h post procedure ( $p < 0.001$ ). Elevated post-procedural WBC ( $p = 0.62$ ), CRP level ( $p = 0.90$ ), and initial RVOT statute of patients ( $p = 0.70$ ) were not a risk factor for IE.

**Conclusion.** Patients with fever within 48 hours after Melody valve implantation are at particular risk of IE in their life. The reasons might be related to a specific genetic profile. Further studies are needed to understand the causes behind.