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Endocarditis risk following percutaneous pulmonary valve implantation is higher with Melody valve compared to Sapien valve.

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Objectives. To compare the risk of infective endocarditis (IE) after percutaneous pulmonary valve implantation (PPVI) with the Sapien and Melody valves.

Background. The incidence of IE after PPVI is estimated at 3% per year with the Melody valve. The Sapien valve is a more recently marketed valve used for PPVI.

Methods. We retrospectively included consecutive patients who underwent PPVI at a single center between 2008 and 2016. IE was diagnosed using modified DUKE criteria.

Results. PPVI was performed in 79 patients (Melody valve, 40.5%; Sapien valve, 59.5%). Median age was 24.9 y [18.1-34.6]. IE occurred in 8 (10.1%) patients at a median of 1.8 years (min 1.0, max 5.6) after surgery. Causative organisms were methicillin-sensitive *Staphylococcus aureus* (n=3), *Staphylococcus epidermidis* (n=1), *Streptococcus mitis* (n=1), *Aerococcus viridans* (n=1), *Corynebacterium striatum* (n=1) and *Haemophilus influenzae* (n=1). All 8 cases occurred after Melody PPVI (25.0% versus 0.0%, $P<0.0001$). The incidence of IE was 5.7% (95%CI, 2.9%-11.4%) per person-year after Melody PPVI. The Kaplan-Meier cumulative incidence of IE with Melody PPVI was 24.0% (95%CI, 12.2-43.9%) after 4 years and 30.1% (95%CI 15.8-52.5%) after 6 years, compared to 0.0% with Sapien PPVI after 4 years ($p<0.04$ by Log-Rank test). There was a trend toward a higher incidence of IE in the first 20 patients with Melody PPVI (who received prophylactic antibiotics during the procedure only) and in patients who had percutaneous interventions, dental care, or non-cardiac surgery after PPVI.

Conclusion. IE after PPVI may be less common with the Sapien compared to the Melody valve.