

一般口演 | カテーテル治療

2026年7月9日(木) 15:40 ~ 16:40 | 第6会場 (Room 604)

[OR12] 一般口演 12 (I-OR12)

カテーテル治療

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[I-OR12-02] Impact of Self-Expanding Transcatheter Pulmonary Valve Implantation on Valve Function, Arrhythmias, and Hemodynamics: The PEARL-TPVI Registry

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キーワード：ファロー四徴症、肺動脈弁閉鎖不全、経カテーテルの肺動脈弁留置術

Background: Transcatheter pulmonary valve implantation (TPVI) using the self-expanding Harmony TPV has emerged as treatment for pulmonary regurgitation following right ventricular outflow tract (RVOT) reconstruction, predominantly in patients after tetralogy of Fallot repair. Since introduction in Japan (March 2023), over 400 procedures have been performed. Real-world data evaluating post-procedural outcomes about hemodynamics remain limited. Methods: This prospective multicenter study enrolled consecutive patients undergoing Harmony TPVI (March 2023-April 2025) at 8 Japanese centers with ≥ 6 procedures each. Serial echocardiography, cardiac MRI, and catheterization were performed at baseline, 3 months, and 1 year to evaluate valve function, ventricular remodeling, and hemodynamics. Results: Total 206 patients enrolled (mean age 39 ± 15 years). One-year catheterization ($n=89$) demonstrated $\leq$ mild pulmonary regurgitation in all. Adverse events: heart failure exacerbation ($n=1$), progressive aortic regurgitation from mild-moderate to moderate-severe ($n=1$, improved with ARB), RVOT valve thrombosis ($n=5$, resolved with anticoagulation modification from DAPT to DOAC in 1 and DOAC plus SAPT in 4), non-sustained ventricular tachycardia requiring ICD ($n=1$), and surgical reintervention for coronary compression ($n=1$). Conclusion: Harmony TPVI effectively controlled severe pulmonary regurgitation with favorable safety, demonstrating low rates of valve thrombosis, progressive semilunar regurgitation secondary to increased cardiac output, significant arrhythmias, and reintervention.