Abstract: **P1476**

**Clinical characteristics and rhythm outcome of catheter ablation of hemodynamically corrected valvular atrial fibrillation**

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Background: Although the hemodynamic burden and structural substrate contribute to valvular atrial fibrillation (VAF) mechanisms, the role of catheter ablation has rarely been reported. We investigated the clinical characteristics, mapping findings, and long-term rhythm outcomes after catheter ablation of hemodynamically corrected VAF.

Methods: We compared 77 patients with VAF (46.8% male, 52.7±8.8 years old, 46.8% paroxysmal AF, 24.7% with maze procedures) and 2,244 patients with non-VAF (NVAF) who underwent catheter ablation. Among the VAF patients, 44 (57.1%) had mechanical valve AF (MV-AF) and 33 (42.9%) underwent a prior mitral valvuloplasty (MVP-AF). We analyzed the catheter ablation rhythm outcomes for MV-AF and MVP-AF.

Results: The left atrial (LA) diameter was greater (p<0.001), LA voltage lower (p<0.001), and procedure-related complication rate higher (mainly sinus node dysfunction, p=0.004) for VAF than NVAF. During 70.2±1.8 months of follow-up, the rhythm outcome of VAF did not significantly differ from that of NVAF after catheter ablation (log rank p=0.399), even after excluding patients with maze procedures (log rank p=0.629). The clinical recurrence rates did not differ between the MV-AF and MVP-AF groups (log rank p=0.244), or between patients with prior maze procedures and those without (log rank p=0.651). The main conduction recovery sites of previous maze procedures were the perimital (84.2%) and cavotricuspid isthmus (84.2%) areas, and recurrence mechanisms were macroreentry (63.2%) and focal/ microreentry (26.3%) at scar border zones.

Conclusions: Although hemodynamically corrected VAF was associated with advanced LA remodeling, the rhythm outcome did not significantly differ from that of NVAF after catheter ablation.