**HYBRID APPROACH WITH RADIOFREQUENCY AND CRYOBALLOON ABLATION FOR PAROXYSMAL ATRIAL FIBRILLATION**

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Introduction: Pulmonary vein isolation (PVI) with cryoballoon therapy may have technical limitations necessitating adjuvant ablation with radiofrequency energy (RF) to treat paroxysmal atrial fibrillation (PAF).

Methods: We report our experience with cryoballoon in 27 patients (10 females; mean age 62 yrs) who failed antiarrhythmic therapy. Adjuvant imaging included CT scans and intracardiac ultrasonography. Circular catheters were employed to assess pulmonary vein (PV) entrance and exit block.

Results: Cryoablation was delivered at all pulmonary veins in 25 (93 %) patients. Cryoballoon could not engage right-sided PVs in one pt. Right PV ablation was abandoned due to pericardial effusion in another. Attenuation of phrenic activity limited right PV ablation in 7 (26%) patients. Complete PVI was achieved in 11 (41%) with cryoballoon alone. Another 14 (52%) had RF ablation where PV-LA conduction persisted; 22 right PVs; 7 left PVs; single PV - 8; two PVs - 5; three PVs - 3. RF ablation was more common in 9 of first 12 patients (75%), compared to 7 (47%) in the subsequent 15 patients. Pericardiocentesis was required in 3 patients (11%). Absence of PAF has been observed in 16 of 18 (89%) patients followed beyond 3 months. Successful PVI with RF for recurrent PAF was performed in 2 patients, 9 and 12 months after the initial procedure.

Conclusions: When technical limitations limit complete PVI with cryoballoon alone, a hybrid approach utilizing cryoballoon and RF ablation can fully isolate PV antra. Greater success with cryoballoon alone may be achievable with more experience.