**THE RISK PREDICTORS OF COMPLICATIONS OF PULMONARY VEIN ISOLATION**

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**Objective:**The aim of this study was to reveal risk predictors of complications in pulmonary vein isolation ( PVI ).

**Method:**We performed a single center, retrospective, medical record-based analysis. 445 patients and 511 procedures in January 2014 to December 2016 were analyzed. Intra-cardiac echo ( ICE ) guided 3D mapping and contact force guided radio frequency ablation was performed. PVI was performed for patients with paroxysmal atrial fibrillation ( PAF ), and was augmented with linear ablation in cases of persistent atrial fibrillation ( PeAF ) or long-standing atrial fibrillation ( LSPeAF ). Complications and risk factors were analyzed.

**Results:**Total hemorrhagic complications occurred in 26 patients ( 5.1% ) and major hemorrhagic events occurred in 5 patients ( 0.98% ). Cardiovascular complications occurred in 43 patients ( 10.5% ). Major cardiovascular incidents including congestive heart failure or low output syndrome, occurred in 12 patients total ( 2.4% ), cerebral infarction in 1 patient ( 0.19% ), bradycardia in 18 patients ( 3.5% ) and ventricular fibrillation in 1 patient ( 0.19% ). The risk factors associated with hemorrhagic complications were diabetes mellitus ( Odds ratio 3.71, 95% CI; 1.23-10.57, p= 0.015 ) and low body weight below 62 kg ( Odds ratio 5.29, 95% CI; 1.88-16.17, p=0.0017 ). Cardiovascular events were associated with a history of congestive heart failure ( Odds ratio 2.47, 95% CI; 1.14-5.18, *p*=0.02 ) and hypertension ( Odds ratio 2.59, 95% CI; 1.28-5.58, *p*=0.007 ). Shock induced by bradycardia was associated with low body weight below 62 kg ( Odds ratio 5.36, 95% CI 1.01-40.9, *p*= 0.048 ).

**Conclusion:** Previously reported risk factors of cardiovascular complications in PVI were similarly detected in our study. In addition to previously reported risk factors, low body weight was one of the risk predictors of both hemorrhagic and bradycardiac complications.