INCIDENCE AND PREDICTORS OF PLEURITIC CHEST DISCOMFORT FOLLOWING ABLATION OF ATRIAL FIBRILLATION

Poster Contributions
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Background: Chest pain following radiofrequency (RF) ablation of atrial fibrillation (AF) is a known occurrence with unknown frequency. We sought to identify procedural and patient characteristics associated with post-ablation pleuritic chest discomfort (PAPCD).

Methods: The study cohort consisted of 170 consecutive patients undergoing pulmonary vein isolation. PAPCD was identified prior to hospital discharge. Pericarditis was defined by chest pain with characteristic electrocardiogram findings. Pericarditis was further defined as mild if symptoms resolved with NSAID monotherapy and as severe if the patient required steroids or had significant effusion. Multivariable logistic regression was used to identify independent PAPCD predictors.

Results: There were 71 subjects with persistent and 99 with paroxysmal AF. Fourteen of 170 (8.2%) subjects had PAPCD of any degree. Of these, 7 (4.2%) had pericarditis, including 5 with mild and 2 with severe pericarditis, and 7 had PAPCD not otherwise meeting pericarditis criteria. Body mass index (BMI) was inversely related to risk of PAPCD (p =0.02, OR 0.79, 95% CI 0.65 - 0.96) but not significantly to pericarditis. Independently, RF time (units in 10 minute increments) correlated significantly with both PAPCD (p = 0.01, OR 1.2, 95% CI 1.1 - 1.4) and pericarditis (p <0.01, OR 1.4, 95% CI 1.1 - 1.6). Pericarditis was not observed in patients with <60 minutes of RF time. The two subjects with severe pericarditis were the subjects with highest RF time (>160 minutes). Other patient and procedural characteristics including left atrial pressure and size and procedure time were not associated with risk of PAPCD or pericarditis.

Conclusions: Longer RF time during catheter ablation of AF was strongly correlated with increased risk of PAPCD, and specifically with increased risk and severity of pericarditis. This may be due to increased amount of local inflammation from more extensive tissue ablation. Durable isolation of pulmonary veins must be balanced with judicious use of RF in order to minimize the incidence of PAPCD and pericarditis.