Abstract: P563

Hemoptysis after cryoablation for atrial fibrillation

Authors:
N Kumar1, I Aksoy2, 1Central Manchester University Hospitals NHS Foundation Trust - Manchester - United Kingdom of Great Britain & Northern Ireland, 2Admiraal de Ruijter Hospital, Cardiology - Goes - Netherlands (The),

Topic(s):
Catheter Ablation of Arrhythmias

Citation:
Aim: Cryoballoon is a widely used tool for ablation for atrial fibrillation (AF). There are several complications after cryoablation. This paper assesses the incidence rate and severity of hemoptysis after cryo ablation for AF.

Methods: For current systemic review and meta-analysis, literature has been reviewed from 2008 to 2019 focusing on the incidence of hemoptysis after cryoballoon ablation for atrial fibrillation catheter ablation in PubMed, Cochrane library and EMBASE databases.

Results: This meta-analysis included 3534 patients from 20 studies; of mean age 54.0 ± 10.9 years. All patients had cryoballoon ablation for paroxysmal or persistent AF refractory to treatment and follow up duration for 8.2 ± 5.9 months with mean procedure duration of 153.4± 65.4 minutes. The mean cryoablation duration was 869.4 ± 148 sec with mean temperature of -59.7 ± 5.1 °C and a total of 109 patients (3.08%) had hemoptysis which was mild in the majority of cases (76.1%), mild to moderate in 20.2% and severe in only 3.7%. Hemoptysis onset was at 29.0 ± 56.5 day with median of 7 days, range (2 hours to 210 days). In 11 studies hemoptysis occurred early in 51 patients (95% CI for I2 was 0.0% to 0.0, P =0.95, I2 was 0.0%), but in 9 studies, hemoptysis occurred late in 58 patients (95% CI for I2 was 0.0% to 0.0, P =0.96, I2 was 0.0%).

Conclusion: Mild hemoptysis is experienced by significant number of cryoballoon AF ablation patients and severe type in 3.5 % attributed to significantly lower temperature in inferior pulmonary veins and is more often associated with bigger cryoballoon.
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