Effect of cryoablation of ganglionic plexus for the prevention of post-operative atrial fibrillation in open heart surgery: a pilot study

Young Choi
Sun-Hwa Kim
Ju yeol Baek
Youmi Hwang
Ju Youn Kim
Tae-Seok Kim
Sung-Hwan Kim
Ji-Hoon Kim
Sung-Won Jang
Man-Young Lee
Hwa-Joong Kim
Yong-Seog Oh

Introduction: Post-operative atrial fibrillation (POAF) is a common problem after cardiac surgery, but an effective preventive therapy has not been established. We evaluated the efficacy of cryoablation for autonomic ganglionic plexus (GP) during open heart surgery in the prevention of POAF.

Methods: Post-operative atrial fibrillation (POAF) is a common problem after cardiac surgery, but an effective preventive therapy has not been established. We evaluated the efficacy of cryoablation for autonomic ganglionic plexus (GP) during open heart surgery in the prevention of POAF.

Result: Mean age was 65.5 (±8.2) years and 22 (61.1%) were male. There was no significant difference in baseline characteristics, underlying comorbidities and left atrial size between the two groups. Cryoablation of GP was associated with higher operation time (320 ± 76 vs. 254 ± 36 minutes, p=0.008), and cardiopulmonary bypass time (96 ± 27 vs. 74 ± 16, p=0.017). POAF was developed in 6 (25%) in GP ablation group and 4 (33.3%) in control group during one month, with no significant difference between the groups (p=0.567). There was no major postoperative complication in entire subjects.

Conclusion: Addition of GP cryoablation during open heart surgery did not significantly reduce the risk of POAF in this pilot study.