

## **COMPARISON OF CLINICAL SUCCESS AND COMPLICATIONS OF THREE TECHNIQUES FOR PULMONARY VEIN ISOLATION IN PAROXYSMAL AF**

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**Introduction:** Several different techniques are currently being employed to perform pulmonary vein isolation (PVI) as treatment for paroxysmal atrial fibrillation (AF). It is currently unclear how these techniques compare regarding clinical success and complication rate.

**Aim:** To compare clinical success and complication rates of three different techniques for PVI: intracardiac echocardiography (ICE) guided antral radiofrequency PVI (ICE-RF), segmental cryothermal PVI (SC) and circumferential cryothermal balloon PVI (CB).

**Results:** 209 patients underwent a first PVI during this period: 37 ICE-RF, 30 SC and 142 CB. Clinical success was not achieved in respectively 16% (6/37), 63% (19/30), 16% (23/142) ( $p < 0,0001$ ), over a mean follow-up of  $688 \pm 567$  days. Significant pericardial effusion was observed in respectively 0% (0/37), 17% (5/30) and 5% (7/142) patients ( $p < 0.02$ ). Vascular complications were seen in 3% (1/37), 0% (0/30) and 9% (13/142) patients (NS). No stroke was seen in any of the three groups. One inferior wall myocardial infarction occurred in the CB group. No pulmonary vein stenosis was seen in any of the patients.

**Conclusion:** When regarding clinical success, segmental cryoablation is less performant than ICH-guided RF ablation and cryothermal balloon procedures. Pericardial effusion is more frequent in cryoprocedures than in ICE-guided RF. There is no significant difference in vascular complications between the three techniques.