Fluoroless cryoablation without iodine contrast – nursing interventions

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CITATION: Cardiol Croat. 2022;17(9-10):303. | https://doi.org/10.15836/ccar2022.303

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Atrial fibrillation (AF) is the most common cardiac arrhythmia encountered in clinical practice with significant morbidity and mortality. The current guidelines and consensus documents on the management of AF state that pulmonary vein isolation (PVI) is a recommended strategy during the treatment of patients with drug-refractory symptomatic paroxysmal AF. The cornerstone of AF catheter ablation is the complete isolation of pulmonary veins by linear lesions around their antrum, either using point-by-point radiofrequency ablation or single-shot ablation devices like cryoballoon ablation (CBA). As the CBA still requires the use of fluoroscopy and iodine contrast, a novel 3D mapping system Kodex-EPD was used with the aim to reduce both fluoroscopy and contrast usage^{1,2}. The feasibility and safety of fluoro-free ablation were tested. Differences in nurses' interventions were also recorded in relation to the classic CBA procedure. During the 2-month period, 15 consecutive patients (9 males and 6 females) undergoing CBA were enrolled (age 60±11). Average time of patient preparation until transseptal puncture was 16±5 minutes while the average mapping time was 12±4 minutes. 7 procedures were performed completely without any use of fluoroscopy, and iodine contrast was used for a single pulmonary vein in only one patient. In all patients, pulmonary vein isolation was achieved without any periprocedural complications. Although on a small number of patients, it can be concluded that CBA with the support of a dielectric mapping system is safe, significantly reduces the need for fluoroscopy and contrast, and in a certain way represents additional engagement in terms of nursing interventions when preparing the patient for the procedure.

RECEIVED: November 4, 2022 ACCEPTED: November 10, 2022



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