



CRYOBALLOON ABLATION OF ATRIAL FIBRILLATION IN REPUBLIC OF MOLDOVA. THREE YEARS OF EXPERIENCE

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Introduction. Atrial fibrillation (AF) is the most common sustained cardiac arrhythmia in adults with currently estimated prevalence between 2% and 4%. AF is associated with significant morbidity and mortality having important impact to both patient's quality of life and health economy. In the last years a lot of research efforts and resources are being directed towards gaining detailed information about the mechanisms underlying AF, its natural course and effective treatments. New evidence is continuously generated and published.

The complexity of AF requires a multidisciplinary approach to the management of AF patients with their active involvement in partnership with clinicians. In recent years, substantial progress has been made in the detection of AF and its management. The procedure of pulmonary vein isolation is an established therapy for symptomatic atrial fibrillation. The second generation cryoballoon is one of the effective methods in achieving pulmonary vein isolation. In 2018 cryoballoon ablation (CBA) was implemented in Republic of Moldova and is regularly performed in Medpark International Hospital in the last three years. The aim of the study was to assess the freedom from AF recurrence after CBA.

Material and methods. A retrospective study was performed in 13 consecutive patients who underwent CBA using Arctic Front Advance cryoballoon (Medtronic) for paroxysmal or persistent AF from June 2018 till December 2020 in Medpark International Hospital. We followed up the patients from June 2018 till April 2021. The information about the clinical symptoms and ECG data during follow-up was collected to identify the presence of recurrence. A recurrence after CBA was considered AF episode present after 3-month blanking period and that lasted at least 30 seconds. Continuous variables are presented as mean \pm SD. Kaplan–Meier analysis was used to determine the probability of freedom from AF during follow-up.

Results. A total number of 13 patients with a mean age of 62.85 ± 6.58 years with paroxysmal ($n=12$; 92.3%) or persistent ($n=1$; 7.7%) AF were identified. There were 10 males (76.9%) and 3 females (23.1%). All patients had a successful pulmonary vein isolation procedure with 100% of veins isolated. No patient had complication during procedure as phrenic nerve palsy, stroke or pericardial effusion. After a 3-month blanking period during a mean follow-up of 369.5 ± 289 days there were 4 (30.77%) AF recurrences. The average days before recurrence was 119.75 ± 33.22 (150, 147, 91 and 91). Freedom from AF recurrence was 69.23% at 30.8 ± 24.1 months follow-up).

Conclusions. The second generation cryoballoon ablation is an effective method of treatment for atrial fibrillation. Our results are compatible with the success rate that is reported by majority of the studies.