

# Cryoballoon ablation for paroxysmal atrial fibrillation: mid-term outcome evaluated by ECG monitoring with an implantable loop recorder.

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## Abstract

**BACKGROUND** The success rate after cryoballoon ablation (CB-A) performed for paroxysmal atrial fibrillation (PAF) might be underestimated by traditional noninvasive monitoring techniques. The purpose of this study was to evaluate the mid-term outcome of CB-A in patients with PAF implanted with an implantable loop recorder (ILR) after the procedure. **METHODS** Between January 2017 and March 2019, all patients who underwent CB-A for PAF and who were subsequently implanted with an ILR were retrospectively included. All devices were equipped with remote monitoring. All ILR-documented atrial tachycardia (AT) or AF episodes [?] 6 minutes were considered as recurrence; both true and false episodes were collected. A 3-month post-procedural blanking period (BP) was applied. **RESULTS** A total of 102 patients (77 male, mean age  $60.6 \pm 9.6$  years) who underwent pulmonary vein isolation (PVI) by CB-A were included; mean time from first diagnosis of AF to PVI was  $51.5 \pm 46.9$  months. Mean follow-up was  $29.3 \pm 8.1$  months; at 12-month follow-up, the success rate was 64.7%, while at 2-year follow-up, freedom from AT/AF recurrences was achieved in 44.1% of the patients. In the follow-up, a total of 4987 ECG strips were analyzed; true-positive episodes were confirmed in 2026 cases (40.6%), while 2961 episodes (59.4%) were considered false-positive. **CONCLUSION** In patients with PAF implanted with an ILR, CB-A results in freedom from any AT/AF recurrence in 64.7% of patients at 12-month follow-up and in 44.1% of patients when evaluated at 2-year. Careful adjudication of all ILR-documented AF episodes is required to avoid misdiagnosis.

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