

Same-day discharge for atrial fibrillation ablation: use of suture-mediated vascular closure device

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Introduction: The most frequent complications of atrial fibrillation (AF) ablation procedures are those related to the vascular access site, which are associated with increased morbidity and length of hospital stay. Purpose: To assess the safety and efficacy of venous access site closure with a suture-mediated vascular closure device (SVD), as well as the feasibility of early mobilization and same-day discharge protocol after AF ablation procedures. Methods: We conducted a retrospective analysis of all consecutive AF ablation patients in whom a SVD was employed to achieve hemostasis after each venous puncture. The ablation was performed under conscious sedation, using 7 to 12-F introducer sheaths. Anticoagulation was uninterrupted but for the last dose prior to the procedure. Intraprocedural heparin was not reversed. Groin ultrasound was performed in the first 10 patients with adequate SVD deployment. Three conditions were required for the same-day discharge protocol application: 1) uncomplicated procedure, 2) successful SVD deployment and 3) adequate recovery. Recovery followed a three-phase protocol: bed rest (two hours), sitting (one hour) and ambulation. Follow-up included phone call and clinical examination. Patients were offered contact to the electrophysiologist if needed. Results: 63 ablation procedures with SVD closure were performed from May 2019 to October 2020, with a total of 132 access sites analysed. Patient characteristics are shown in the table. The SVD was successfully deployed in 125 (94.7%) and hemostasis immediately achieved. In the remaining 5.3%, failure was attributed to a deficient technique, which missed to advance the knot to the vein. First 10 patients were ultrasound evaluated 24 hours later (no early discharge), showing total absence of complications. 35 subsequent patients (55.6% of the remaining 53) were discharged the same day without ultrasound control. The remaining 18 stayed overnight for reasons not related to the access site (hemodynamic surveillance, initiation of antiarrhythmic drugs or loss of phrenic capture), allowing in any case early mobilization (three hours after the procedure). Mean follow-up was 272 ± 160 days, with no adverse events recorded. Conclusion: SVD are safe and effective in achieving rapid hemostasis, making the early mobilization and same-day discharge protocol after AF ablation feasible in selected patients.

Age	63 (57-71)
Male	46 (73%)
Body mass index (kg/m ²)	27,5 (24,2-31,6)
Previous anticoagulation	50 (79,4%)
- Vitamin K antagonist	14 (28%)
- Direct oral anticoagulation	36 (72%)