

Title: Same Day Discharge in Atrial Fibrillation Ablation Procedure- A Single Center Experience

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Background: A standard AF ablation procedure generally requires overnight hospital observation (length of stay (LOS)=1). For patient satisfaction reasons, El Camino Hospital has decided to discharge patients on the same day when post-procedural clinical conditions support it. In this quality assurance review, we retrospectively analyzed procedure characteristics and outcomes related to same day discharge in AF ablation patients.

Methods: Data from AF ablation procedures (in NCDR® AFib Ablation Registry®) performed by the primary physicians in our facility from January 2016 to November 2017 were analyzed. All patients had oral anticoagulants withheld 24-48 hours prior to the procedure. Prior to the AF ablation, the option of same day discharge was discussed with all patients. Under general anesthesia, patients were intubated and femoral veins accessed with or without ultrasound guidance. The AF ablation procedure was performed using intracardiac echo (ICE), the Baylis NRG™(Baylis Medical), a 3D mapping system (EnSite Velocity, St Jude Medical), irrigated ablation catheters with contact-force sensing (TactiCath, St Jude Medical), and a steerable Agilis™ (St Jude Medical) sheath. Most patients underwent pulmonary vein isolation (PVI) by either complete circumferential or segmental pulmonary vein ablation along with cavo-tricuspid isthmus (CTI) line ablation. Some patients underwent more complex ablations with additional linear lesions in the left atrium. Heparin was administered following the transseptal puncture with a target anticoagulation time (ACT) of 250-300 sec. Following the ablation, sheaths were pulled back into the right atrium and heparin was discontinued. Protamine was administered, for a target ACT \leq 180 sec before sheath removal and manual compression applied. Patients were extubated in the procedure room and then sent to PACU for cardiac monitoring as well as to ensure no bleeding complications. Patients were released to telemetry for bedrest and then ambulated. If no clinical complications or concerns arose, the option of same day discharge was offered to patients. The same day discharge patients were contacted with follow-up phone calls the next day. Statistical analysis used Student t-test and Chi-squared method. A p-value less than 0.05 was considered significant.

Results: A total of 124 patients (mean age: 70 yo; 27% female) were included in our quality assurance review. The average hospital stay was 17.5 hours. The majority of patients (85/124, 68.5%) chose to have same day discharge. Only 2 patients had LOS>1 day, which was for Sotalol loading. Patient age (mean 69.7 vs 70.3, NS) and gender (% female, 27% vs 26%, NS) had no effect on same day discharge or length of stay. There were no clinical complications; specifically, no early or late bleeding complications. On average, patients with same day discharge had shorter anesthesia (247 vs 280 min, $P<.001$) and procedure time (194 vs 224 min, $P<.001$) when compared to LOS>0 patients. Patients starting their procedure afternoon were less likely to be discharged on the same day of the procedure (33% vs 15%, $P<.05$).

Conclusions: Within the sample reviewed, same day discharge after a standard AF ablation procedure appeared to be safe and satisfying to patients at El Camino Hospital. The majority of our patients

preferred to be discharged same day. Morning procedures, shorter anesthesia time, and shorter procedure time correlated with same day discharge.

Table 1: Length of post procedure hospital stay (day), average hospital duration (hr), anesthesia time (min) and procedure room time (min) in LOS>0 and LOS=0 patients in Atrial fibrillation Ablation patients

	Count	%	Average of Hospital Duration (hr)	Average of Anesthesia Time (min)	Average of Room Time (min)
LOS=0	85	68.5%	11.23	247.0	193.8
LOS>0	39	31.5%	31.25	279.9	224.4
LOS=1	37	29.8%			
LOS=2	1	0.8%			
LOS=3	1	0.8%			
Grand Total	124		17.53	257.4	203.4
T-test			P<0.001	P<0.005	P<0.001