Same Day Discharge for AF Ablation: A New Standard of Care through Early Ambulation Using VASCADE MVP®

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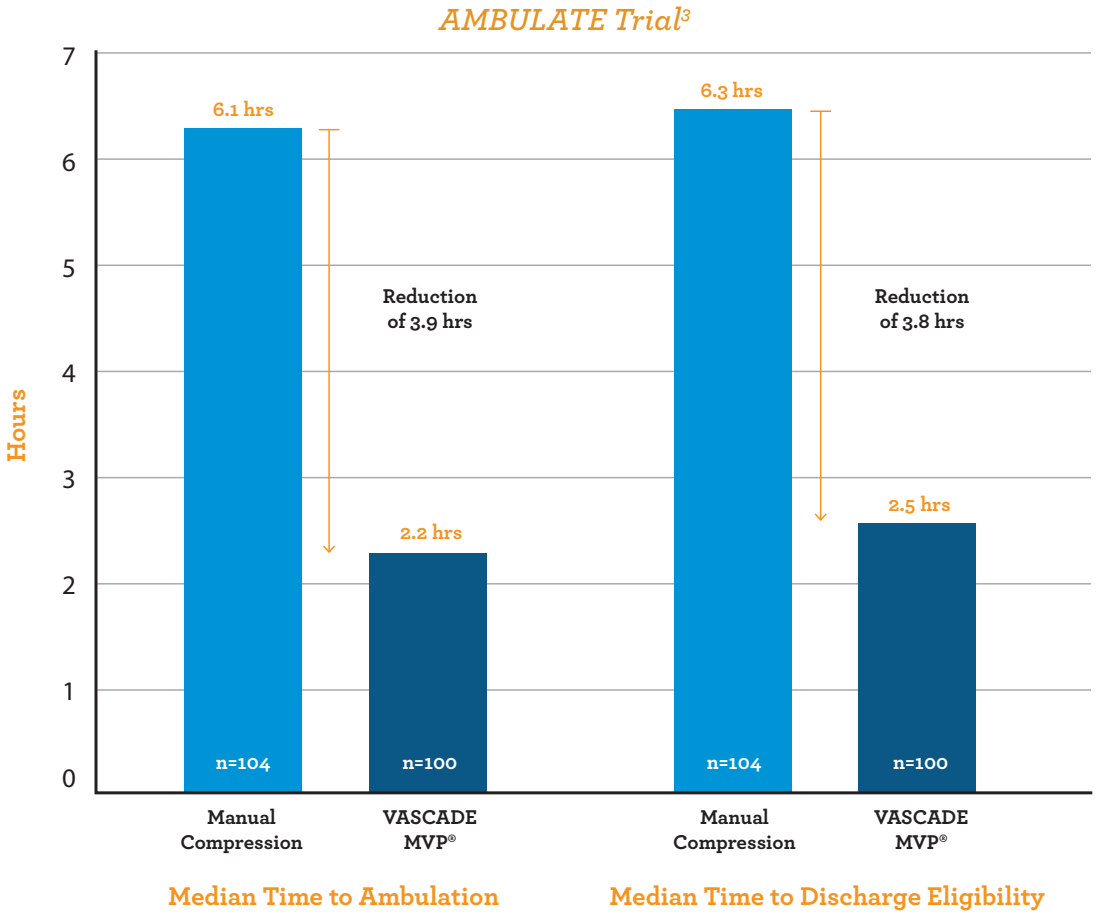
At Emory Saint Joseph's Hospital, my partners Anshul Patel, MD and Christine Tompkins, MD and I perform approximately 700 atrial fibrillation (AF) ablations annually. Manual compression (MC) of the femoral venous access site/s post-AF ablation has been the most common method for achieving hemostasis; however MC is uncomfortable for patients, usually requiring 4-6 hours of lying flat to keep the limb/s immobilized, and often including the use of a urinary catheter. Manual compression also creates workflow challenges for clinicians and nursing staff, requiring dedicated resources to manage patients post-procedure for several hours.

We began using VASCADE MVP® Venous Vascular Closure System (Cardiva Medical) for AF ablation patients as part of the AMBULATE Clinical Trial, a prospective, randomized, multicenter trial to evaluate VASCADE MVP compared to MC. We quickly realized the clinical value of early ambulation for our AF patients and lab staff, and began to implement a same day discharge (SDD) program for AF, atrial flutter and supraventricular tachycardia ablation patients.

Enabling Same Day Discharge Through Early Ambulation[1]

VASCADE MVP® venous vascular closure device was designed for EP procedures, and is the only FDA-approved closure device for use following cardiac ablations.[2] VASCADE MVP is used with 6F-12F inner diameter (15F maximum outer diameter) procedural sheaths, including for use with ArcticFront™ cryoablation (Medtronic) and Watchman™ left atrial appendage closure (Boston Scientific). VASCADE MVP can be used in single or multiple access sites, in one or both limbs.

VASCADE MVP was randomized 1:1 to MC in the prospective, multicenter AMBULATE Trial. The study's primary endpoints were time to ambulation and major access site complications, with secondary endpoints of time to hemostasis, total post procedure time, time to discharge and discharge eligibility, time to closure eligibility, procedure and device success and minor access site complications. Additional data were reported on patient satisfaction and use of opioids post procedure.



> ***"We quickly went to early ambulation and then very quickly to the last step, which was the ability to discharge 95% of our patients after complex ablations."***
>
> ***– David B. De Lurgio, MD***

Why We Started a Same Day Discharge Program

Our motivations to initiate a same day discharge program for AF ablation stemmed from our positive experience with VASCADE MVP as an investigative site for the AMBULATE Trial, where we experienced the benefits of early ambulation on our workflow and patient experience. COVID-19 accelerated our need to make changes. With the majority of elective procedures shut down, we needed to free up beds, all while

1. VASCADE MVP demonstrated median Time to Discharge Eligibility of 2.5 hours in the AMBULATE Clinical Trial.
2. Cardiac ablations requiring two or more access sites within the same limb. See VASCADE MVP IFU 3972. December 2020.
3. Natale A, et al. Venous vascular closure system versus manual compression following multiple access electrophysiology procedures: THE AMBULATE Trial. JACC Clin Electrophysiol October 2019. DOI: 10.1016/j.jacep.2019.08.013

coping with a steep decline in hospital revenue that resulted in staff furloughs and pay cuts. We had to adopt a new approach; one that would reduce the need for telemetry beds, reduce time spent in PACU and reduce nursing staff needs, all while providing a better recovery experience for patients. Our goal was to discharge as many cardiac ablation patients as possible the same day, which would provide clinical benefit to our patients as well as overall economic benefit to our hospital.

Transforming Your Workflow through Same Day Discharge using VASCADE MVP®

During the initial phase of our SDD program, we treated 450 cardiac ablation patients (AF, SVT/Flutter) with VASCADE MVP—of which 95% were discharged the same day. We reported fewer groin complications with no re-bleeds.

We saw significant positive impacts to our workflow, including reduced need for telemetry beds, decreased time waiting for sheath pullers, decreased time in PACU and ARU, fewer log jams related to pre- and post-procedure beds, and a more efficient use of time among lab personnel.

With our new SDD program underway, we transformed our workflow into a new paradigm—95% of our AF ablation patients are now discharged the same day. Some patients may not be eligible for SDD due to a specific medical reason or distance/travel considerations; we carefully evaluate patients and discuss our SDD program with them prior to their AF ablation. These workflow efficiencies have a fairly significant savings potential; these allow the staff more freedom to do other things. For example, people in the PACU, in the ARU and even people in the lab can be utilized for other areas of patient care.

Economic Value to Hospital Administration

To understand the value versus cost of an SDD program using VASCADE MVP, we had in-depth discussions with key stakeholders including EP lab managers, clinicians and hospital executives. While the devices do add cost to the ablation procedure, it is important to understand the long-term savings that can be realized through shorter length of stay, reduced need for urinary catheters and risk of urinary tract infections, and reduced lab staffing needs post-ablation.

VASCADE MVP was part of the AMBULATE IMPACT study, designed to evaluate the economic impact of early ambulation through workflow analyses conducted at two high-volume ablation centers. Third-party healthcare economic analyses studied workflow savings categories: shorter lab time, clinical events such as UTIs, less resource utilization and shorter length of stay. AMBULATE IMPACT study demonstrated potential average savings of $1,200 to $2,300 per patient.

A New Standard of Care—Same Day Discharge is Here to Stay

Our experience with SDD has been very positive, demonstrating a better patient experience, and improved clinical results. For our initial 450 SDD cardiac ablation patients:

- Zero (0) clinical complications
- Zero (0) emergency department visits post-SDD procedure
- Decreased use of pain medications
- Improved workflow

An SDD program using VASCADE MVP has transformed our AF ablation workflow and allowed us to provide a better patient experience. Same day discharge is here to stay in our institution.

Dr. De Lurgio was not financially compensated by Cardiva Medical for this publication, and the content is an accurate presentation of his personal opinions. Refer to the product IFU before use for important safety information.

Same Day Discharge for AF Ablation Patients Using VASCADE MVP® at Emory Saint Joseph's

At Emory Saint Joseph's Hospital, our initial SDD program of 450 cardiac ablation patients saw an average per-patient savings of ~ $1,400 (including cost of devices). With an annual ablation volume of 700 procedures, our top line, annualized savings is estimated at ~ $980,000 for the hospital.

Same Day Discharge at Emory Saint Joseph's Hospital

Workflow	Pre-SDD	SDD with VASCADE MVP®
Pull Sheaths	Recovery	EP Lab
Closure Methods	Manual Compression	VASCADE MVP
Time to Ambulation	4-6 hours	2 hours
SDD for AF Ablation Patients	0%	95%

Impact of Same Day Discharge for AF, SVT/Flutter Ablation Patients (n=450) Using VASCADE MVP®

- Zero (0) Clinical Complications
- Zero (0) Emergency Department visits post-SDD procedure
- Decreased use of opioid pain medications
- Improved workflow