

Getting AF Ablation Patients Home the Same Day: Early Ambulation Using VASCADE MVP®

Benjamin A. D'Souza, MD, FACC, FHRS
Cardiac Electrophysiologist, Penn
Presbyterian Medical Center
Assistant Professor of Clinical Medicine,
University of Pennsylvania School of
Medicine
Philadelphia, Pennsylvania



Benjamin A. D'Souza, MD

Penn Presbyterian Medical Center is a 357-bed facility serving the greater Philadelphia and southern New Jersey region. Our cardiology and electrophysiology programs continue to provide leading-edge care as part of Penn Medicine, which is consistently ranked among the top hospitals in the U.S. We are the busiest EP lab in our metropolitan area, performing ~1,000 cardiac ablations annually, and the first hospital in Philadelphia and southern New Jersey to offer same day discharge for AF ablation patients.

We began using VASCADE MVP® Venous Vascular Closure System (Cardiva Medical, a Haemonetics company) for AF ablation patients to improve our workflow following the COVID-19 crisis. Prior to adopting early ambulation and same day discharge with VASCADE MVP, we used manual compression (MC) to achieve hemostasis in femoral access sites postablation. Manual compression is typically achieved through 4-6 hours of bedrest, with the patient lying

flat/immobilized, and at times including the use of a urinary (Foley) catheter. Not only is this uncomfortable for the patient, it can create workflow challenges for physicians and staff, with dedicated resources needed to manage post-procedure care.

Enabling Same Day Discharge Through Early Ambulation¹

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 use in radiofrequency and cryoablation, as well as left atrial appendage closure (LAAC) procedures. VASCADE MVP can be used in single or multiple access sites, in one or both limbs.

“With the workflow improvements in an early ambulation program with VASCADE MVP, we were able to quickly move from zero same day discharge for AF ablation to establishing a program where 95% of my patients are discharged same day.”

- Benjamin A. D'Souza, MD

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 postprocedure.

“When patients are delaying care for AF, due to concerns for staying overnight in the hospital, outcomes from their ablation can worsen. If providing same day discharge can improve this scenario, we can enhance the standard of post-ablation care, and create greater value for our patients.”

- Benjamin A. D'Souza, MD

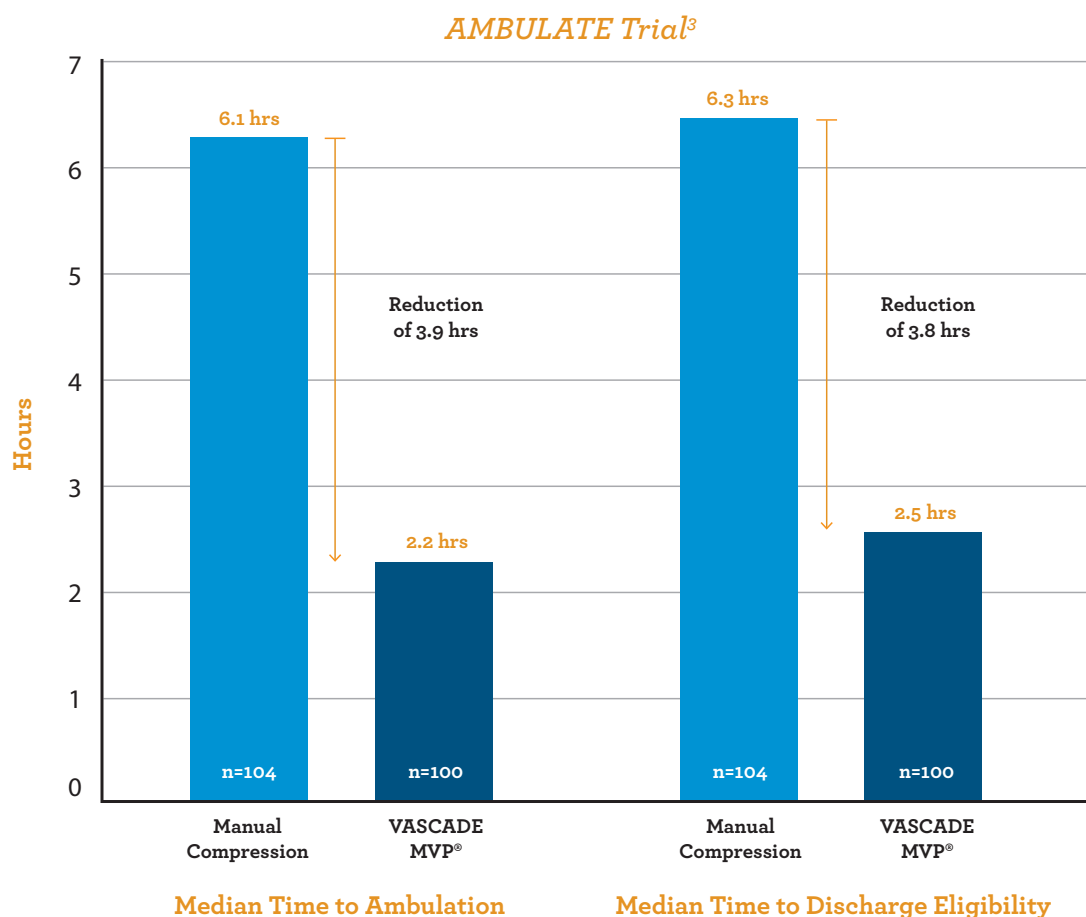
“What if we could get our patients up and out of the hospital sooner?”

At Penn Presbyterian Medical Center, COVID-19 changed everything. Like many institutions, we face an ongoing need to free up beds, and when COVID-19 hit, our situation became much worse. Initially, we had to halt all ablation procedures as we managed the COVID-19 crisis. As we restarted our ablation procedures, patients were extremely fearful, telling us they did not want to stay overnight in the hospital for fear of contracting the virus.

We recognized that we had to act. We set out to improve efficiencies in our EP lab, and find ways to get our patients home sooner and safely.

Improving EP Lab Workflow – Advantages from a Same Day Discharge Program

While lab throughput is important, there are limitations in how we can affect it. It's not



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.
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. NCT03193021

New Same Day Discharge (SDD) Registry - Paroxysmal Study Results⁴

AMBULATE Study Series
Same Day Discharge Registry

Prospective, multicenter study of same day discharge in paroxysmal AF ablation subjects

Only VASCADE MVP[®] is the only FDA-approved closure device for use following cardiac ablations²

456 Access Sites

151 Subjects

27 Investigators

8 US Centers

90% of VASCADE MVP subjects were successfully discharged the same day

99% of VASCADE MVP subjects successfully discharged the same day did not require intervention post-discharge*

0% ZERO (0) major complications

*Through 15-day follow-up
NCT04203329

feasible to simply build more labs and hire more electrophysiologists. Overtime staffing is not a long-term solution; it adds costs, creates more inefficiencies and fosters dissatisfaction among lab staff.

By adopting a same day discharge program with early ambulation, we have seen significant improvements in our workflow:

- Reduced number of patients needing overnight stay
- Ability to free up pre-/post-procedure beds
- Improved scheduling of AF ablation patients throughout the day
- Flexibility in post-procedure care, with the ability to move, manage and discharge patients accordingly

Now, 95% of my AF ablation patients are discharged the same day. With the workflow improvements in an early ambulation program with VASCADE MVP, we were able to quickly move from zero same day

discharge for AF ablation to establishing a program where 95% of my patients are discharged same day.

Support from Hospital Administration

Our hospital administrator stakeholders recognized that an early ambulation and same day discharge program had the potential to lower overall healthcare costs, as well as provide clinical value to patient care.

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.⁵

Same Day Discharge for AF Ablation Patients Using VASCADE MVP[®] at Penn Presbyterian Medical Center



At Penn Presbyterian Medical Center, our initial same day discharge program for AF ablation patients saw an average per-patient savings of ~\$1,600 (including the cost of VASCADE MVP devices). When applied to our annual AF ablation volume of ~544 procedures, our potential annualized savings is ~\$870,000.

Improving Patient Satisfaction through SDD at Penn Presbyterian Medical Center

In general, many AF patients who are eligible for ablation can have concerns about getting the procedure. In particular, they are concerned about an overnight stay in a hospital during a pandemic, which leads to delays in care. These delays can lead to a worse outcome with AF ablation. If providing same day discharge can improve this scenario, we can enhance the standard of post-ablation care, and create greater value for our patients.

Same day discharge for AF ablation is now my default. While there is a subset of patients who might not be eligible due to comorbidities or lack of caregiving support at home, we work closely with our patients to educate them on our same day discharge process. Our nursing staff call all patients the next day to ensure timely care and follow-up.

Sponsored Content
©2021 Cardiva Medical, Inc.

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



Same Day Discharge (SDD) of AF Ablation Patients at Penn Presbyterian Medical Center

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

Impact of Same Day Discharge for AF Ablation Patients Using VASCADE MVP:

- Improved workflow
- Zero (0) clinical complications due to SDD
- Better patient satisfaction post-procedure

4. Adopting a same-day discharge strategy after AF ablation: Feasibility & safety. Presented by Zayd A. Eldadah, MD at the Western AF Symposium, February 26, 2021, Session 9. NCT 04203329

5. Data on file, Cardiva Medical. AMBULATE IMPACT Study, April 2018. EX 4372