

Pre-Procedure Planning using VIVO™ and the 12-Lead Mortara (Hillrom) Holter

VIVO™ Case Review

Case History

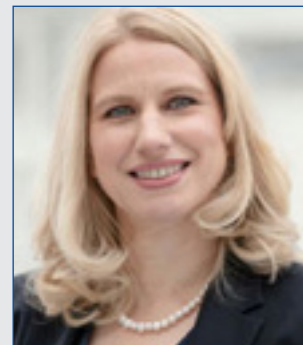
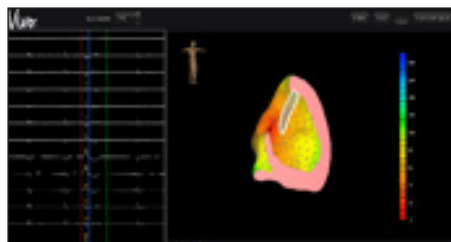
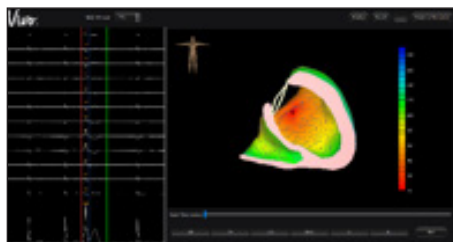
70-year-old female presented with symptomatic monomorphic PVCs and a structurally normal heart. This patient had undergone a previous ablation without a reduction of PVC burden or symptoms.

Pre-procedural Non-invasive Mapping Protocol

The patient underwent a standard cardiac MRI routinely obtained for PVC ablations. The MRI was then uploaded to the VIVO system and segmented the day before the scheduled ablation procedure to create a patient specific heart and torso model.

24 hours prior to the scheduled procedure the patient was admitted to the hospital and a 12-lead Mortara Holter was placed on the patient. While the patient was wearing the 12-lead Holter a 3D photograph was taken using the VIVO camera to localize the exact location of the 12-lead ECG locations.

The morning prior to the procedure, the ECG data from the 12-lead Holter was uploaded to the VIVO system and the PVC was analyzed. An activation map was created using all data imported into VIVO. VIVO localized the PVC to the posterior left basal area. It was determined from the 12-lead ECG that the PVC onset was left sided, however, the exact location could not be determined.



PHYSICIAN
Sabine Ernst, MD

FACILITY DETAILS

Imperial College
of London, Royal
Brompton Hospital

TECHNOLOGY

- Mortara 12-lead Holter
- CARTO® 6,
Biosense-Webster
- Stereotaxis Niobe®
Robotic Magnetic
Navigation

Ablation Procedure

The Stereotaxis system was used in addition to the Carto EAM system. The ablation catheter was introduced via a retrograde aortic approach and a shell of the aorta and left ventricle was created.

The ablation catheter was placed in the area that VIVO localized the PVC onset and a 96% pace-map using the Carto system was produced in approximately 5 minutes. RF delivery was delivered to the area localized by VIVO and elimination of the PVC was noted after therapy delivery. The total procedure time was 58 minutes.

Results/Conclusions

- VIVO accurately identified the onset of the PVC in advance of the procedure after a failed previous catheter ablation.
- Using the location identified by VIVO, the physician was able to quickly localize the area of interest, thus eliminating the need to pace-map the entire left ventricle.
- Despite a previously failed catheter ablation, VIVO was able to assist in identifying the PVC onset and providing a successful outcome. At the 6 month follow up visit the patient had no recurrence.
- The entire mapping time was 5 minutes vs the estimated time of 3 hours by the physician, resulting in a > 50% reduction in mapping time as a result of the pre procedure VIVO localization map.

“VIVO was utilized pre-procedurally and provided an accurate location to guide my ablation procedure. In a typical procedure, I estimate that I spend 3 hours pace mapping to identify and confirm the location of ablation. VIVO reduced this time to 5 minutes!”

-Sabine Ernst, MD

To learn more, call +1.973.691.2000 or email: info@CatheterPrecision.com

