**A BENEFIT OF IMPELLA DEVICE IN ABLATION OF SCAR RELATED VENTRICULAR TACHYCARDIA**

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**Objective:** Mapping of the ventricular tachycardia (VT) for ablation can initiate acute hemodynamic decompensation (AHD) which leads to termination of procedure before completion. The purpose of our study is to evaluate if ablation procedure for the scar related VT can be completed when the Impella devices are used to counteract or prevent AHD.

**Method:** In our practice, Impella devices were used in 15 male patients with scar related VT who underwent ablation. The immediate success of the procedure was measured by completion of ablation procedure evident by the non inducibility of the clinical VT. In all patients, the cerebral SPO2 was assured to be maintained in the normal range at all time with the Impella support with or without vasopressors.

**Results:** All these 15 patients with the mean age of 68, all of them had scar-related VT. 13 patients had Implantable Cardiac Defibrillator (ICD) with recurrent shocks. 3 patients presented with VT storm, 8 presented with unstable VT and 4 presented with stable VT. Among all patients, 86.66% had ischemic cardiomyopathy and 13.34% had dilated cardiomyopathy. 46.66% had NYHA I-II symptoms and 53.34% had NYHA III-IV. All patients had ejection fraction below 30%, ranging anywhere from 10% to 30%. General anesthesia was used universally, and LV was mapped in all of the patients. 80% of the patients went into AHD which necessitated the placement of Impella device. 1 patient with VT storm already had IABP which needed to be changed to Impella for the ablation procedure. In 40% of the patients, impel 2.5 liter was used and in 60%, impel 3.5 was used. Procedure was completed in all patients with non-inducibility of clinical VT. In 13% of patients, other VTs with different morphology were induced. Impella was able to be weaned off immediately in 11 patients while the remaining 4 patients were weaned off from Impella over 24 to 48 hours. None of them had immediate complication from Impella device.

**Conclusion:**From our study, we have proven that using Impella during the ablation of the scar related VT is safe and effective for the completion of procedure to non-inducibility of clinical VT regardless of the presence of unstable VT or VT storms upon presentation.