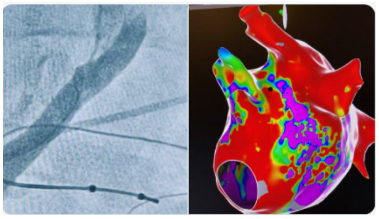

Case Study Details Successful Resolution of Atrial Flutter Using Vein of Marshall Ethanol Infusion

Virtua heart rhythm specialists Aatish Garg, MD, Heath Saltzman, MD, and Darius Sholevar, MD, published in the May 2022 issue of *EP Lab Digest* a case study of a patient with long-standing, persistent atrial fibrillation and inducible mitral annual flutter who was successfully treated with vein of Marshall (VOM) ethanol infusion.

The Virtua heart rhythm team began performing VOM ethanol infusion last year. Following endocardial catheter ablation, a secondary catheter is threaded to the coronary sinus and the VOM. Expanding a balloon within the VOM, 5 to 10 cc of ethanol is injected into the vein, destroying the tissue causing the irregular heartbeat.

The 78-year-old male patient presented with a history of symptomatic, persistent AFib for three years despite adequate rate control. Over the years, multiple cardioversions were attempted, but each time he reverted back to AFib, which was accompanied by significant shortness of breath and fatigue. Antiarrhythmic drugs could not be used due to a prior liver transplant.

Catheter ablation was performed for atrial fibrillation. Atrial flutter was reproducibly induced in the lab, which was noted to go around the mitral valve. Despite extensive ablation, the flutter could not be terminated, as it was using the Vein of Marshal on the outer surface of the heart to bypass the ablation that was performed. A 9 cc VOM ethanol infusion restored the patient's normal sinus rhythm and terminated the atrial flutter. The patient remains in normal rhythm at nine-month follow-up.

With the demonstrated effectiveness of VOM ethanol infusion, the team hopes to increase the success rate of catheter-based ablation for persistent AFib and atrial flutter—reducing the need for repeat ablations and improving patients' quality of life. Read the full study here.