Epicardial Ablation of Ventricular Arrhythmia
Single Center Experience
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A novel approach to ablation of ventricular arrhythmia originating from epicardium, by direct trans-thoracic catheterization of epicardial space was recently reported. We sought to present our initial experience with this approach.
Methods and Results: Thirteen patients underwent 16 epicardial procedures. Indication were left ventricle outflow (LVOT) PVC's with PVC's-induced cardiomyopathy (7 pts) and VT due to ischemic (1pt) or non-ischemic (5 pts) cardiomyopathy. In all but 1 patient epicardial ablation was performed after previous failed attempts of endocardial or endovascular (coronary sinus (CS), aortic cusp) approach. CARTO mapping was performed in all 6 VT cases. In 4 of them, with use of simultaneous endocardial and epicardial mapping. In patient with PVC's, 4F Cardima catheter was used to facilitate mapping in all but one case. Procedure was performed under general anesthesia in 4 patients and under conscious sedation in others. Open irrigation ablation catheter was used in all but three cases. Coronary angiography was performed in all cases before epicardial ablation in LVOT. Consequent to the coronary angio, ablation was avoided due to proximity to major coronary arteries in 3 cases. Epicardial ablation was performed in 13 cases: 11 with radiofrequency (RF) and 2 with CRYO energy. Arrhythmia terminated in 7 cases ("acute success"). In 2 cases (PVC's) late recurrence necessitates additional procedure and in another 2 (VT) - few recurrences were successfully managed by medical and ICD therapies
No complication was related to epicardial access. In one case, acute LAD occlusion occurred after RF energy application that was treated with PCI.
Conclusions: Epicardial approach is useful for ventricular arrhythmia mapping and ablation. Success rate is modest, especially in LVOT PVC cases, were proximity to coronary arteries can prevent optimal energy delivery and cause acute vessel's occlusion. Epicardial access is safe and can be performed using conscious sedation.