A CASE OF INCESSANT ISCHEMIC VENTRICULAR TACHYCARDIA

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BACKGROUND

Sustained polymorphic ventricular tachycardia (VT), also known as VT storm, is an arrhythmic disorder with high mortality rate. Advanced heart failure surgical therapies may be necessary if ischemic VT storm failed to respond to percutaneous revascularization.

CASE SUMMARY

A 54-year-old female with medical history significant for non-insulin dependent diabetes mellitus, hypothyroidism, tobacco and marijuana use presented to the emergency department with acute dyspnea. Electrocardiogram (EKG) revealed acute anterior ST elevation myocardial infarction (STEMI).

Coronary angiography showed severe multi-vessel coronary artery disease with near occlusion of left anterior descending (LAD) artery and chronic total occlusion of the right coronary artery. Echocardiography showed depressed left ventricular systolic function with calculated ejection fraction of 25%.

Percutaneous intervention was not immediately feasible. Percutaneous mechanical circulatory support with intra-aortic balloon pump was instituted as a bridge to stability.

Subsequently, electrical instability with incessant polymorphic ventricular tachycardia ensued and lead to cardiogenic shock.

Percutaneous mechanical circulatory support was escalated to surgical Impella 5.5. The patient suffered worsening of electrical instability despite aforementioned mechanical support as well as antiarrhythmic therapy.

Attempts at suppressing this incessant ventricular arrhythmia with percutaneous revascularization of LAD lesion was unsuccessful and the patient continued to have electrical and mechanical deterioration. Decision was later made to pursue urgent listing for heart transplantation.

CONCLUSION

Sustained polymorphic ventricular tachycardia is most commonly caused by myocardial ischemia. Coronary revascularization is typically effective in suppressing the arrhythmia and allowing for hemodynamic and overall clinical stability. In our case, revascularization did not favorably impact the patient’s clinical outcome and advanced heart failure surgical therapies were pursued.

Disclosure Information

The authors have no financial disclosure or conflicts of interest with the presented material in this poster.