

**DOBUTAMINE FACILITATES REVERSION OF ATRIAL STUNNING AFTER  
CONVERSION OF TACHYCARDIA-INDUCED CARDIOMYOPATHY- A CASE REPORT**

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**BACKGROUND/AIMS:** Tachycardia-induced cardiomyopathy occurs as a result of prolonged and rapid heart rates. It is a reversible form of heart failure characterized by left atrial (LA) and left ventricular (LV) dilatation that is usually reversible once the tachyarrhythmia is controlled.

**METHODS:** A 33-year-old male with a history of chronic glomerulonephritis and in the uremic state, who suffered from persistent atrial flutter (AFL) with rapid ventricular rate for 3 months complicated by tachycardia-induced cardiomyopathy (LA diameter=64 mm, LV ejection fraction (EF)=35%), underwent catheter ablation of persistent AFL.

**RESULTS:** Deterioration of LV function (EF=33%) developed after successful restoration of sinus rhythm via linear catheter ablation from the tricuspid valve annulus to the inferior vena cava isthmus with bidirectional conduction block. His LV contractility improved after treatment with short-term intravenous dobutamine 5  $\mu$ g/kg/min. After follow-up for 4 months, the patient was still in sinus rhythm with much-improved LV contractility (EF=50%) and regression of LA diameter (44 mm).

**DISCUSSION/CONCLUSION:** Atrial stunning is a transient depression of atrial mechanical function after successful conversion of atrial arrhythmia. The suggested mechanisms of atrial stunning are tachycardia-induced cardiomyopathy, cytosolic calcium accumulation and atrial hibernation. Dobutamine could facilitate reversion of atrial stunning after conversion of tachycardia-induced cardiomyopathy.

**Key words:** cardiomyopathy, arrhythmia, catheter ablation, electrophysiology