

The left atrial and appendage function changes following successful electric cardioversion in atrial fibrillation

Rajat Sharma¹, Honey Sharma², Jagmohan Singh Varma², Ashita Sharma³, Deepali⁴



1. Cardiac electrophysiology division, Fortis Hospital, Mohali, India
2. Cardiology division, Fortis hospital, Mohali, India
3. Clinical biochemistry and research. Medical writer, India
4. Observer department of cardiology, Fortis Hospital, Mohali, India

Abstract

Background: External direct current cardioversion remains the most widely used and cost-effective method to restore sinus rhythm (SR). Successful cardioversion of atrial fibrillation usually results in left atrial (LA) and LA appendage (LAA) stunning that may last up to a few weeks and is observed after all methods of cardioversion. It is responsible for an increased incidence of thromboembolic events following DC cardioversion, this despite restoration of sinus rhythm. Materials and methods-. This prospective observational study was conducted starting from July 2017 to September 2018 on 50 consecutive patients with non-valvular AF who underwent successful CV to sinus rhythm. The Echocardiographic assessment of LA by TTE and TEE was done pre and post direct current cardioversion at 0, 1, 3- and 6-months interval and various parameters of LA function were analyzed. Parameters assessed on TTE were LVEF, LAEF, A wave velocity, A' velocity, LArV, LA peak systolic strain and LAFI. TEE was done to rule out LA/LAA clot and assess LAeV and SEC. Results- The LVEF improvement was linear and from a baseline value of 48.55% it improved to 50.08% immediately following successful ECV and it improved further to 52.00% at 1 month, 53.57% at 3 month and 55.45% at 6 months (p = 0.000). Conclusion- The Systolic function of left atrium (left atrial emptying fraction) improved after a successful cardioversion and continued thereafter. LAFI which combines analogues of LA volume, its reservoir function and the LV stroke volume, is an expression of atrial function independent of baseline rhythm. LAFI showed significant increase after successful cardioversion.

Biography:

Dr. Rajat Sharma is the lead physician and heads the Heart Rhythm Pacemaker Division at Fortis Hospital Mohali. After completing his core cardiology residency from the premier Postgraduate Institute of Medical Education and Research, he pursued an advanced fellowship in Clinical Cardiac Electrophysiology from University of Dalhousie, Canada. He specializes in the management of various cardiac arrhythmias or heart rhythm abnormalities. He manages a regular Heart Rhythm Clinic, Heart Failure Clinic, Pacemaker Device Clinic and Inherited Heart Disease Clinic at Fortis Hospital Mohali.

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