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## Role of Prophylactic Electrolyte Supplementation during Ibutilide Cardioversion of atrial tachyarrhythmias in Coronary Care Unit

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Ibutilide, Class III anti-arrhythmic agent is currently indicated for rapid atrial tachyarrhythmias as an alternative to electrical cardioversion in patients who are hemodynamically stable. The potential adverse effects of the drug include QT Prolongation and torsades de pointes. We aim to study the impact of prophylactic electrolyte supplementation on the efficacy of ibutilide for conversion of atrial tachyarrhythmias to sinus rhythm. A retrospective study of 120 patients who received ibutilide for pharmacological cardioversion of atrial tachyarrhythmias were enrolled. Patients who did not receive prophylactic electrolyte supplementation before or during ibutilide therapy has categorized as Group I (n=60), while those who received prophylactic electrolyte supplementation of Magnesium and Potassium categorized as Group II (n=60). Seventy one patients were male (59.1%) and mean age was 58.7+/-14.4 years. 61 (50.8%) patients had diabetes mellitus and 55 (45.8%) patients had systemic hypertension, 72 (60%) patients had Ischemic Cardiomyopathy. The mean LVEF was 37.4%. An infusion containing 10 ml ibutilide solution (0.1 mg/ml of ibutilide) and 40 ml of 5% dextrose was given through a peripheral vein over 10 minutes. Another similar dose of ibutilide was administered if cardioversion was not achieved within 10 minutes. Primary end point was restoration of sinus rhythm within 90 minutes. Secondary end points includes adverse events (QT prolongation, ventricular arrhythmias and need for electrical cardioversion. If pharmacological cardioversion failed, DC cardioversion beginning with 50J was performed. The QTc was continuously monitored and specifically just before successful cardioversion, at the 10th and 90th minute and 4th hour of infusion. Significant occurrence of ventricular arrhythmias (Torsades des pointes) noted in Group I (n=5) comparing Group II (n=0), p value of 0.040. Ibutilide is safe for pharmacological cardioversion of atrial tachycarrhythmias and its efficacy was enhanced by the prophylactic electrolyte supplementation

### Biography

I, Mr. Mohamed Akram K A, working as a Cardiac Technologist in the Department of Cardiac Electrophysiology and Pacing, Arrhythmia Heart Failure Academy, Madras Medical Mission, Chennai. I have been actively involved in providing technical support- assisting permanent pacemaker implantations, higher-end device implants – CRT, conduction system pacing (His-Bundle and Left-Bundle area pacing), electrophysiology study and Radiofrequency ablation of Supraventricular and Ventricular Tachycardias. I have also worked on various academic and research projects. I have participated in numerous educational seminars, paper presentations, interesting case presentations, abstract submissions in national and international conferences. I also play an active role in conducting annual educational programs organised by the Madras Medical Mission. I review and manage the remote monitoring and device clinic in our centre and I play an active role as mentor for student Allied Health Professional in our centre. I have authored a book chapter and co-authored several abstract publications in esteemed Cardiology Journals.

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