IBUTILIDE CARdioversion for recent onset ATRIAL FIBRILLATION In ISCHEMIC CARDIOMYOPATHY

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Introduction: Atrial fibrillation (AF) is the most common arrhythmia and accounts for frequent emergency visit and hospitalization. The data regarding the efficacy of Ibutilide in recent onset AF in ischemic cardiomyopathy is scarce. Electrical cardioversion is effective but associated with logistic issue and its own complications. Pharmacological cardioversion with ibutilide is effective and obviates the need for sedation but carries small risk of QT prolongation with attendant Torsades de pointes (TdP).

Methods: An observational study of 55 follow up cases of ischemic cardiomyopathy patients who had recent onset AF and underwent pharmacological cardioversion in our institute in terms of acute success and adverse events. Hemodynamically significant valvular lesions, cardiogenic shock or requiring intubation, severe LV dysfunction (EF < 25%), intracardiac clot and baseline QTc >480ms were excluded. Electrolyte and acid-base disturbances were corrected. Prophylactically one gram of magnesium was administered intravenously. If INR was less than 2, I.V. 5000U of heparin administered. 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. Same dose of ibutilide was administered if cardioversion was not achieved within 10 minutes. Primary end point was conversion of AF to sinus rhythm within 90 minutes. Secondary end points included adverse events (Bradycardia, QT prolongation, ventricular arrhythmias, stroke and death) ventricular rate, transformation to atrial flutter (AFL) and need for electrical cardioversion. If cardioversion failed, DC cardioversion beginning with 50J was performed. The QTc was continuously monitored and documented before successful cardioversion, at the 10th and 90th minute and 4th hour of infusion. Patients were observed for 4 hours closely.

Result: The patient’s characteristics has been described in enclosed image. The patients were highly symptomatic (NYHA class IV) and palpitation was the predominant symptom. Acute successful ibutilide cardioversion was seen in 39(70.9%) patients, 26(47.2%) with first dose and 13(13 out of 16) with second dose. Thirteen (29.1%) patients were cardioverted with 100J DC shock under intravenous sedation. Mean pre-Ibutilide QRS duration and QTc were 95.9±23.4 milliseconds (ms) and 416.1±68.2
Post Ibutilide QRS and QTc were 98.2±24.2 ms and 510.4±71.5 ms. Three (5.5%) patients had short runs of TdP. AF to AFL was seen in five patients after ibutilide. One patient had AF recurrence during the observation period. No stroke or death observed.

**Conclusion**: Ibutilide is a safe and an effective option when restoration of sinus rhythm is considered before electrical cardioversion. Patients with prolonged QTc should be observed closely for adverse events.