**Introduction**: Long standing persistent atrial fibrillation (AF) in post-operative rheumatic heart disease (RHD) without residual valvular lesion may require restoration of sinus rhythm when quality of life and ventricular function progressively decline even after adequate rate control. Ibutilide has emerged as an effective agent for pharmacological conversion of AF. Its rapid and high conversion rate may avoid electrical cardioversion. It is known to reduce defibrillation threshold. The data regarding the efficacy of ibutilide in RHD is scarce.

**Methods**: A prospective study of 21 such patients. Hemodynamically significant valvular lesions, 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. Another similar 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 AFL and need for electrical cardioversion. If pharmacological cardioversion failed, DC cardioversion beginning with 50J was performed. The QTc was continuously monitored and documented just before successful cardioversion, at the 10th and 90th minute and 4th hour of infusion. Patients were observed for 4 hours in intensive care unit.

**Result**: The patients characteristics has been described in enclosed image. Acute successful ibutilide cardioversion was seen in 12(57.1%) patients, 7(33.3%) with first dose and 5(35.7%) with second dose. Nine (42.9%) patients were cardioverted with 50J DC shock under intravenous sedation. Two patients required additional 100J DC shock. Two (9.52%) patients had short runs of TdP. 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 even in long standing persistent AF in post-operative RHD.