

Results A total of 79 articles were found and 8 articles involving 506 patients were finally included. The outcomes of Meta analysis were: (1) The significant difference between pooled total efficacy rates of intravenous Ibutilide and amiodarone in patients with atrial fibrillation and atrial flutter was $Z=2.08$, $p=0.04$, combined RR 1.34 (95% CI 1.02 to 1.77). (2) No significant difference was found of intravenous Ibutilide and amiodarone in patients with atrial fibrillation. $Z=1.79$, $p=0.07$, combined RR 1.17 (95% CI 0.99 to 1.40). Funnel-plot displayed a symmetrical figure, indicating there was no significant publication bias. (3) There are only four trials analysed cardioversion rate of atrial flutter separately, and all of them agreed that the effectiveness of Ibutilide was prior to amiodarone. Significant difference in preventing atrial flutter between the two drugs was found ($Z=5.62$, $p<0.00001$, RR 2.71, 95% CI 1.91 to 3.84). No significant publication bias was found. (4) The significant difference of cardioversion time of Ibutilide and amiodarone in treatment of atrial fibrillation and atrial flutter was ($Z=4.22$, $p<0.0001$, WMD=-168.76 min, 95% CI -247.07 to -90.45 min). (5) Meta-analysis of total adverse reactions of the two drugs indicated that $Z=0.23$, $p=0.82$, combined RR 1.10 (95% CI 0.49 to 2.48), whereas because the cardiovascular side effects are more significant for arrhythmia patients, we analysed the cardiovascular adverse reactions of the two drugs, $Z=3.13$, $p=0.002$, combined RR 1.92 (95% CI 1.28 to 2.89), but the funnel plot suggested that publication bias might exist.

Conclusion Compared with amiodarone, Ibutilide has enhanced total efficacy in cardioversion of atrial fibrillation and atrial flutter; there was no significant differences in the cardioversion rate of atrial fibrillation between the two drugs; the effectiveness of Ibutilide was prior to amiodarone in atrial flutter cardioversion. The cardioversion time of atrial fibrillation and atrial flutter in Ibutilide group was significantly shorter than amiodarone group. In the adverse reactions analysis, there was no significant difference of total side effects between two groups, but the cardiovascular adverse reaction rate of Ibutilide group was significant higher than amiodarone group.

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A META-ANALYSIS OF IBUTILIDE VERSUS AMIODARONE IN CARDIOVERSION EFFICIENCY AND SAFETY OF ATRIAL FIBRILLATION AND ATRIAL FLUTTER

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Objective To evaluate the therapeutic effectiveness and safety of Ibutilide and amiodarone in treatment of atrial fibrillation and atrial flutter.

Methods An electronic search of databases including PubMed, Embase, CBM, CNKI, WAN FANG, VIP Database, (1994.1–2011.1) and Cochrane Library (Issue 2, 2011) was carried out to include the RCTs in English and Chinese for the comparison between Ibutilide and amiodarone. We also performed a manual search of the RCTs and studies included in the references of eligible studies. The Rev Man4.2 software of Cochrane Coordination Net was used for statistical analysis.