INPLASY PROTOCOL

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Review Stage at time of this submission: **Data analysis.**

Conflicts of interest:
None declared.

The effectiveness of angiotensin receptor-neprilysin inhibitor in ventricular arrhythmia in patients with Heart Failure with Reduced Ejection Fraction: a systematic review and meta-analysis

Dong, ZY[1]; Yusup, M[2]; Lu, YM[3]; Tang, BP[4].

Review question / Objective: **To evaluate the effectiveness of ARNI on ventricular arrhythmias in patients with heart failure with reduced ejection fraction (HFrEF).**
Condition being studied: **Although Beta Blockers, RAAS inhibitors, and ICD/CRT-D therapies for HFrEF patients have more than halved the risk of sudden cardiac death in the past two decades, sudden cardiac death remains one of the major causes of death in patients with HFrEF.**
Information sources: **We searched PubMed, MEDLINE, EMbase and The Cochrane Library for ARNI in the treatment of heart failure, the search time limit is June 1, 2015 to June 1, 2021.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 05 September 2021 and was last updated on 05 September 2021 (registration number INPLASY202190012).

INTRODUCTION

Review question / Objective: **To evaluate the effectiveness of ARNI on ventricular arrhythmias in patients with heart failure with reduced ejection fraction (HFrEF).**

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cardiac death remains one of the major causes of death in patients with HFrEF.

METHODS

Participant or population: HFrEF patients.

Intervention: ARNI.

Comparator: ACEI/ARB.

Study designs to be included: Observational prospective study.

Eligibility criteria: (1) Heart failure with reduced ejection fraction (ejection fraction <40%)(2) Follow-up time ≥ 6 months. (3) Arrhythmia is monitored by a long-term ECG monitoring device [Implantable Cardioverter Defibrillator (Implantable Cardioverter Defibrillator, ICD), Cardiac Resynchronization Therapy (CRT), and implantable ECG event recorder (Insertable Cardiac Monitors, ICM)] completed. (4) The study endpoints include ventricular arrhythmia, the main indicators.

Information sources: We searched PubMed, MEDLINE, EMbase and The Cochrane Library for ARNI in the treatment of heart failure, the search time limit is June 1, 2015 to June 1, 2021.

Main outcome(s): Incidence of ventricular arrhythmia; Biventricular pacing rate; Appropriate shock rate.

Quality assessment / Risk of bias analysis: The quality of the included literature was evaluated according to the Newcastle-Ottawa Scale score.

Strategy of data synthesis: Review Manager version 5.3 (The Nordic Cochrane Centre, The Cochrane Collaboration, Copenhagen, 2014) was used to combine the effect sizes with 95% confidence intervals (CIs) and with a two-sided $P < 0.05$ considered to be statistically significant.

Subgroup analysis: None.

Sensitivity analysis: None.

Country(ies) involved: China.

Keywords: ARNI; Heart Failure; Ventricular Arrhythmias.

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