

information. At last, we choose the variable and process data with RevMan 5.0.

**Results** Six trials with data for 2022 patients were identified by the literature search. Combination with aliskiren therapy was not associated with a significant improvement in left ventricular ejection fraction in chronic heart failure patients, weighted mean difference (WMD) with standard therapy  $-0.64\%$ , 95% CI from  $-0.12$  to  $-0.09$ ,  $p < 0.05$ ; but the left ventricular end-systolic volume in intervention group was significantly reduced (WMD  $-2.63$  ml, 95% CI from  $-5.15$  to  $-0.12$ ,  $p < 0.05$ ). Aliskiren can reduce the plasma BNP concentration compared with standard therapy (WMD  $-20.78$  pg/ml, 95% CI from  $-36.98$  to  $-4.58$ ,  $p < 0.05$ ). Besides aliskiren do not show a significant protective effect for hospitalisation (RR 0.84, 95%CI from 0.42 to 1.67,  $p > 0.05$ ) and all-cause mortality. Meanwhile, combination with aliskiren may bring more hyperkalemia (RR 1.81, 95% CI from 1.20 to 2.72,  $p < 0.05$ ) and hypotension (RR 1.54, 95%CI from 1.10 to 2.16,  $p < 0.05$ ).

**Conclusions** Aliskiren might be a more effective strategy for chronic heart failure treatment. It can bring some cardiac protection, and may lead to more adverse events when combines with standard treatment of heart failure. More studies, especially larger multicentre randomised controlled trials, are warranted to clarify the effect of aliskiren on chronic heart failure.

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### DIRECT RENIN INHIBITOR–ALISKIREN: A META-ANALYSIS OF RANDOMISED CONTROLLED TRIALS IN CHRONIC HEART FAILURE PATIENTS

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**Objectives** To explore whether aliskiren could improve cardiac function and clinical outcomes, then to evaluate the incidence of adverse events in chronic heart failure patients.

**Methods** A systematic literature search was conducted to identify randomised controlled trials of aliskiren for chronic heart failure in CNKI, WangFang Data, CMB, PubMed, Cochrane Library, Springerlink, High Wire by independent two author. Reports of trials were sought that compared aliskiren with standard treatment for chronic heart failure in adults. Then according to the Cochrane Handbook for systematic reviews, we estimate the quality of the randomised controlled trials and collect the useful